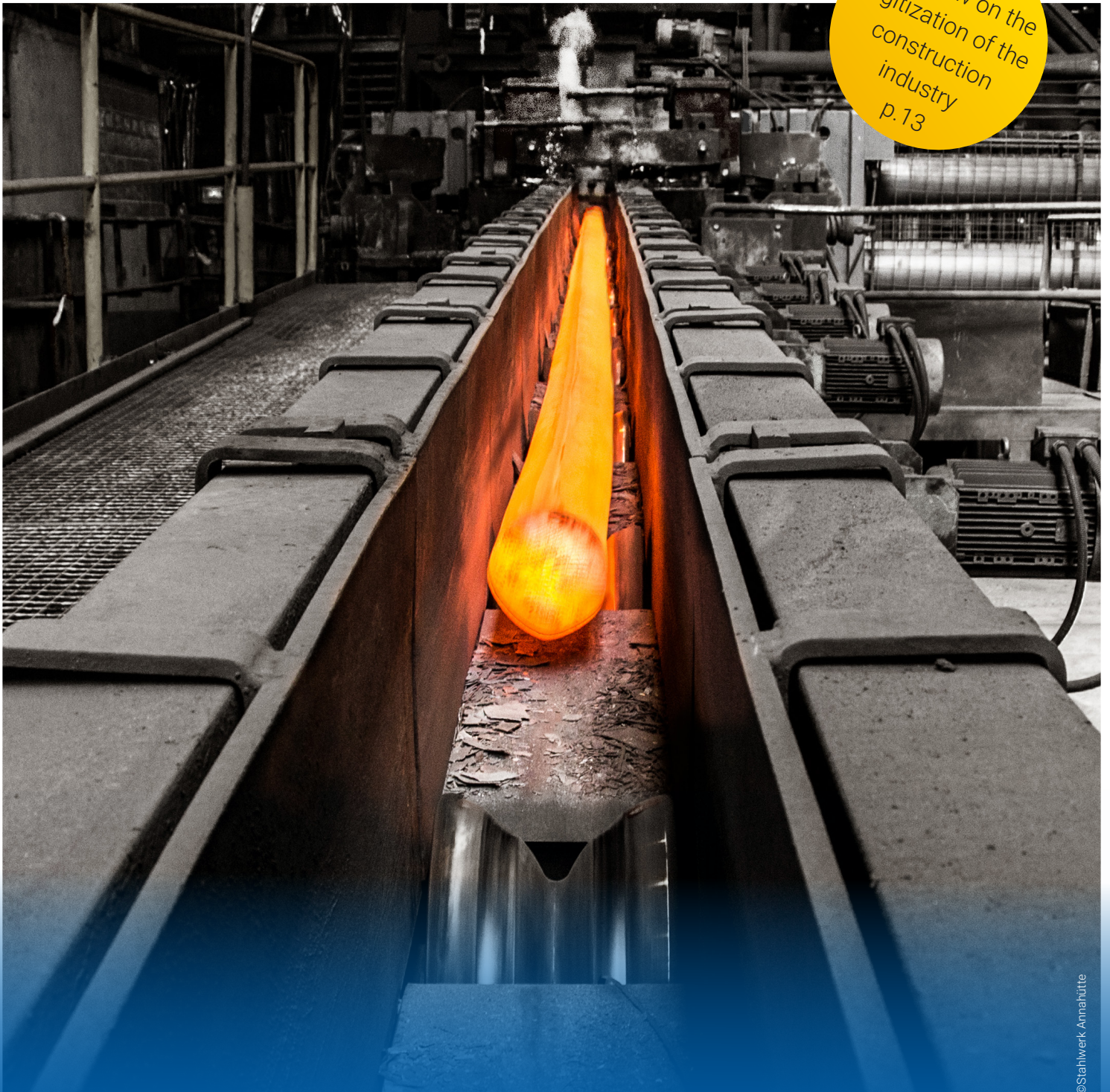


FRILO Insight.

The magazine for FRILO users

Interview on the
digitization of the
construction
industry
p.13



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High strenght steel

SAS 670/800 in the
Reinforced Concrete Column B5+

FBC & GEO

Transfer of building data
from the BIM-Connector®

Tips & tricks

Output profile and
licence management

Increasing Productivity is Key

Dear Readers,

Improving efficiency and increasing productivity are important topics in your everyday work in times of engineering shortages and increasing time pressure. Interfaces, common standards and interoperability between software solutions make a decisive contribution in this regard – as does the FRILO BIM-Connector®, which enables the efficient transfer of model data from CAD programs to the world of FRILO calculation programs. Therefore, in this issue you will learn how to optimally prepare the data in the BIM-Connector for the transfer to the GEO building model.

Helping you to increase your productivity! This is also the objective of the alliance “Nemetschek Engineering”, which is made up of FRILO, SCIA and DC-Software. In this interview, Markus Gallenberger and Ines Prokop reveal how structural engineers benefit from the alliance and what role the design phase plays in sustainable construction.

Speaking of sustainability, the industry is also concerned about saving resources in construction. In the lead article of this issue, you will learn how you can significantly reduce material consumption in the design of reinforced concrete columns with the help of high-strength reinforcement. I hope you enjoy reading this issue!

Your Peter Fritz
Head of Product Management



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On the way to achieving the ambitious climate targets, it will be important for the construction industry to exploit the potential of digitalization. In this interview, Ines Prokop and Markus Gallenberger discuss the influence of the design phase on sustainable construction, why the Structural Analysis Format (SAF) is good for the BIM working method and why structural engineers benefit from the newly formed alliance “Nemet-schek Engineering”.



High-strength steel for more sustainability in concrete construction

Since 1999, the Annahütte steelworks have produced high-strength threaded steel of grade SAS 670/800, which is increasingly used in high-rise building projects for highly loaded concrete columns. Because this steel grade increases significantly the load-bearing capacity of columns with the same cross-section, it makes a considerable contribution to sustainability in concrete construction. FRILO offers the appropriate calculation program to make the high-strength reinforcement suitable for practical use.

Compared to normal B500 reinforcing steel, high-strength steel allows considerably higher limit loads for the same column cross-section. This means that much less steel is necessary to achieve the same load-bearing capacity. Therefore, it is possible to realise cross-sections for columns with high-strength steel where normal reinforcing steel reaches its limits in terms of suitability for installation. Because the columns can have smaller cross-sections, the useable floor space of the building can be increased. In many cases, columns in high-rise construction that are reinforced with high-strength steel thus prove to be a more economical alternative to composite columns.

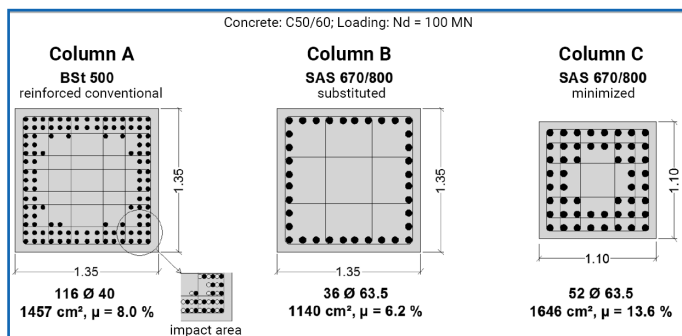


Fig. 1: Cross section optimization with SAS 670 (©Stahlwerk Annahütte)

Moreover, the use of high-strength reinforcement increases sustainability in concrete construction, as less steel is needed in total. This is not only important in the context of shrinking resources. A reduction in the amount of reinforcing steel or the volume of concrete also leads to significant savings in CO₂ emissions. The benefits of high-strength steel are therefore obvious. However, how can the high-strength reinforcement for



Abb. 2: Ominiturm, Frankfurt (©Stahlwerk Annahütte)

columns reliably be determined in a verification process?

The history of determining the load-bearing capacity of columns with high-strength reinforcement

Due to the compressive strain of the concrete defined in DIN EN 1992-1-1 for centric pressure, optimal utilization of the steel strength is not



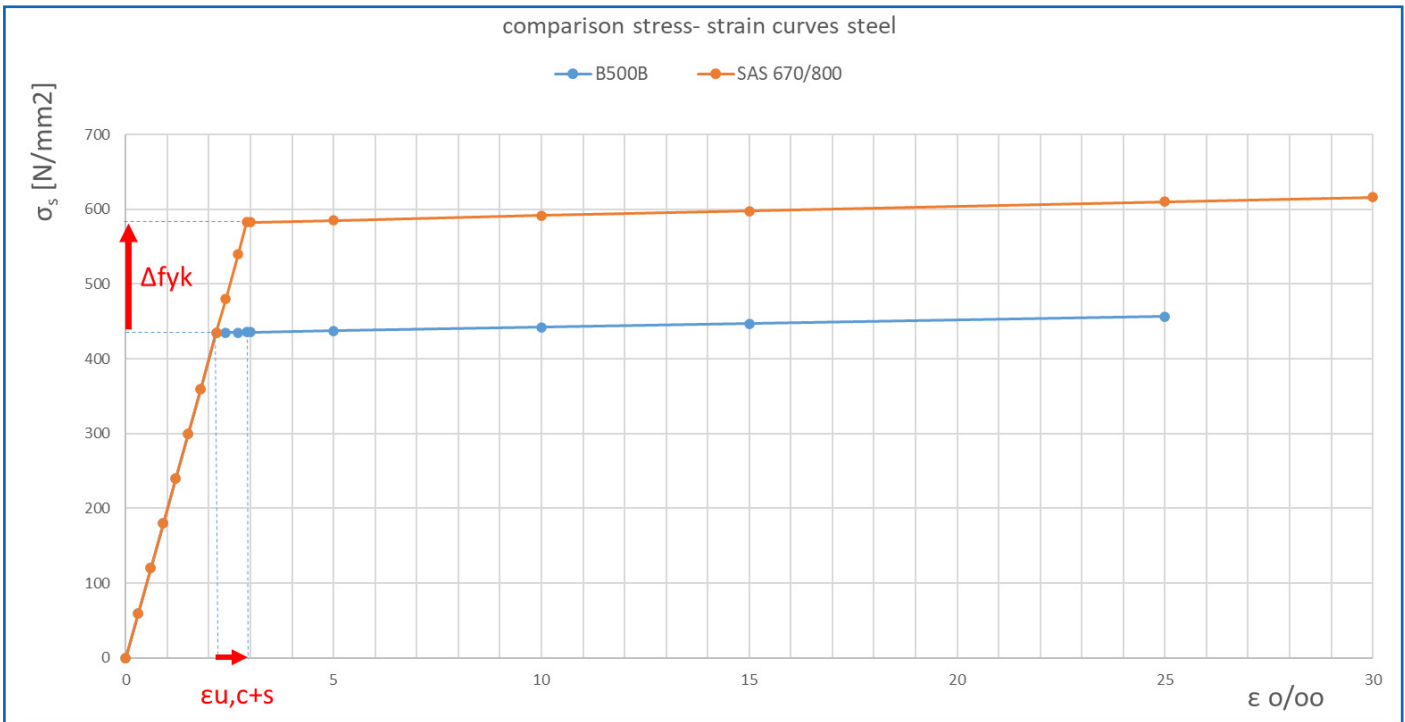


Fig. 3: Stress-strain curves steel of SAS 670 and B500

possible. Therefore, a method [1] using the nominal stiffness method and an MS Excel design tool [2] based on it were developed about 14 years ago. They allow the high steel strength to be utilized mathematically through the verification of redistribution strains due to creep and shrinkage. The assumptions and design approaches of the developed method were reviewed in corresponding expert reports [3].

In Germany, the application initially required an individual approval by the building authorities in each case. The publication of the European approval ETA-13/0840, which is also available in a revised version as a „European Technical Assessment“ [4], and the granting of a type approval by the German Center of Competence in Civil Engineering DIBT [5] make it possible to use the high-strength steel SAS 670/800 in Germany without individual approval by the building authorities.

Collaboration of FRILO and the Annahütte steelworks

The limitations in the design tool related to the structural system and the loading, the lacking permission to use the nominal stiffness method

ETA-13/0840 of 28.06.2018

Allgemeine Bauartgenehmigung

Deutsches Institut für Bautechnik (DIBT)

STÄHLWERK ANNAHÜTTE
Max-Aicher-Allee 1+2
83404 Altringing - Hammerau

Gegenstand dieses Beschlides:
Stahlbetonbauteile unter Verwendung des hochfesten Bewehrungssysteme SAS 670/800

Der oben genannte Regelungsgegenstand wird hiermit allgemein bauaufsichtlich genehmigt.
Dieser Bescheid umfasst vier Seiten.

Fig. 4: ETA-13/0840 and type approval



in Germany and a missing hot design were the reasons why the Annahütte steelworks, FRILO Software GmbH and the engineering office Prof. Graubner developed in close cooperation an additional module for the FRILO program Reinforced Concrete Column B5+ that takes high-strength reinforcement into account. The add-on module B5-SAS was launched in November 2021 and allows the load-bearing capacity to be determined according to the general (non-linear) method for single-storey concrete columns reinforced with high-strength steel SAS 670/800. Following ETA 13/0840, maximum utilization of the steel strength is realised by taking into account creep and shrinkage redistributions. This high-strength threaded steel of grade SAS 670/800 was originally developed for geotechnical applications but is now also being used successfully in several high-rise building projects in Germany, Poland and the United States [6].

The basic assumptions for the simplified method of the Excel design tool used before, which were strongly on the safe side, can now be taken into account much more precisely and thus more economically using the general method.

Challenges in implementing the verifications

Due to the consideration of the redistribution strains due to creep and shrinkage varying over time, it was necessary to observe and record the load history up to the beginning of the utilization over a defined number of load increments. In addition, the strongly straggling values for creep and shrinkage as well as the temporal uncertainties of the construction process had to be taken into account. In addition, there was uncertainty about the true magnitude of the modulus of elasticity for concrete and its ambivalent influence on the design result for columns more or less susceptible to deformation. Due to the simultaneous increase of the load-bearing capacity and the effects of actions, it was necessary to examine additional points in time for the design. In addition to the time $t \rightarrow \infty$, in particular the start of utilization had to be investigated, which usually becomes decisive, in contrast to columns with normal-strength reinforcement. Due to the additional points in time and the calculation for each time

Summary of results 2nd Order, with e_i (persistent/transient design situation)						
Bending design(extreme values from all calculated points of time)						
Time	Height [m]	N_d [kN]	$M_{y,d}$ [kNm]	ρ [%]	$A_{s,req}$ [cm ²]	$A_{s,exist}$ [cm ²]
Start of use - ϕ +30 %	3.25	-18780.0	389.74	6.35	244.43	274.89
Start of use - ϕ -30 %	3.25	-18780.0	364.43	6.88	264.73	274.89
1000 d by NB - ϕ +30 %	3.25	-18780.0	399.23	6.21	239.06	274.89
1000 d by NB - ϕ -30 %	3.25	-18780.0	381.15	6.50	250.22	274.89
infinite - ϕ +30 %	3.25	-18780.0	399.25	6.21	239.05	274.89
infinite - ϕ -30 %	3.25	-18780.0	386.88	6.40	246.26	274.89

Strain redistributions (for decisive design sections at all calculated points of time)												
Time	Height [m]	N_{Ed} [kN]	N_G [kN]	N_Q [kN]	M_y [kNm]	M_z [kNm]	ϵ_{cu} [‰]	ϵ_{su} [‰]	$d\epsilon$ [‰]	ϕ_{res}	ϕ_{eff}	A_s [cm ²]
Start of use - ϕ +30 %	3.25	-18780.0	-9800.0	-1110.0	389.74	0.00	0.532	0.149	0.000	0.931	-	244.63
Start of use - ϕ -30 %	3.25	-18780.0	-9800.0	-1110.0	364.43	0.00	0.312	0.088	0.000	0.556	-	264.76
1000 d by NB - ϕ +30 %	3.25	-18780.0	-9800.0	-1110.0	399.23	0.00	0.697	0.216	0.016	1.115	-	239.25
1000 d by NB - ϕ -30 %	3.25	-18780.0	-9800.0	-1110.0	381.15	0.00	0.437	0.130	0.000	0.691	-	250.43
infinite - ϕ +30 %	3.25	-18780.0	-9800.0	-1110.0	399.25	0.00	0.658	0.255	0.127	1.227	-	239.23
infinite - ϕ -30 %	3.25	-18780.0	-9800.0	-1110.0	386.88	0.00	0.484	0.156	0.000	0.761	-	246.29

Fig. 5: Summary of the results of all design times in the output document



point with positive and negative variance, the calculation effort increases significantly, which is also reflected in the computing time. Thanks to a calculation process that was programmed to partially run in parallel, the increase in computing time could be kept within certain limits, however.

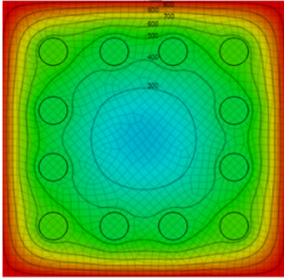


Fig. 6: Temperature profile taking into account the reinforcing steel

Because of the very large reinforcement diameters of up to 75 mm and reinforcement ratios of up to 20 %, and due to the requirement of considerably long fire resistance periods for high-rise buildings, additional considerations were necessary for the thermal analysis as a part of the hot design [7]. For the hot design, it is therefore possible to take the higher thermal conductivity of the steel into account in the thermal analysis.

Reference literature

- [1] Falkner, Gerritsen, Jungwirth, Sparowitz: "Das neue Bewehrungssystem; Druckglieder mit hochfesten Betonstahl SAS 670/800"; Beton und Stahlbetonbau 56/2008, S. 304 ff.
- [2] Falkner, Gerritsen, Krokowski: "Gutachterliche Stellungnahme zu dem Bemessungsprogramm, den Nomogrammen und den Tabellen zur Bemessung von Stützen mit hochfester Bewehrung (SAS 670)", Falkner und Partner 2010
- [3] Graubner: "Gutachterliche Stellungnahme zur Beurteilung der grundlegenden Bemessungsansätze für Stahlbetonstützen mit hochfester Bewehrung", 2010
- [4] European Technical Assessment ETA-13/0840 vom 20.12.2021 mit EAD 160011-00-0031
- [5] Z-1.1-285:15.05.2019-05.05.2024: Allgemeine Bauartgenehmigung "Stahlbetonbauteile unter Verwendung des hochfesten Bewehrungssystems SAS 670/800"; DIBT 2019
- [6] SAS 670 / 800 Grundlagen der hochfesten Bewehrungstechnik; SAH 09/2019
- [7] VfdB Leitfaden Ingenieurmethoden des Brand-schutzes, 4. Auflage 2020
- [8] Handbuch zu B5+: Stützenbemessung mit SAS 670 auf www.friilo.eu: [FL_B5-SAS.pdf](#)
- [9] „Hochfester Stahl zu B5+ (SAS670) | Annahütte & FRILO“ auf [Youtube](#)

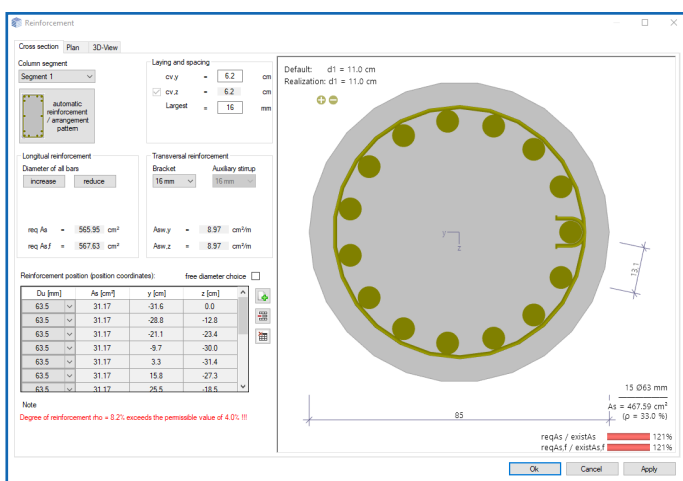


Fig.7: Reinforcement layout dialog in B5+

Authors: Bert Ziems, Jens Hoffmann



From the BIM-Connector® to the Building Model

Tips for the easy transfer of building data

In this article, we explain the general procedure for transferring building data from the BIM Connector® (FBC) to the Building Model (GEO). Two different types of construction projects are placed in the focus: Buildings that are connected to each other via a common basement and buildings with a height difference within a storey.

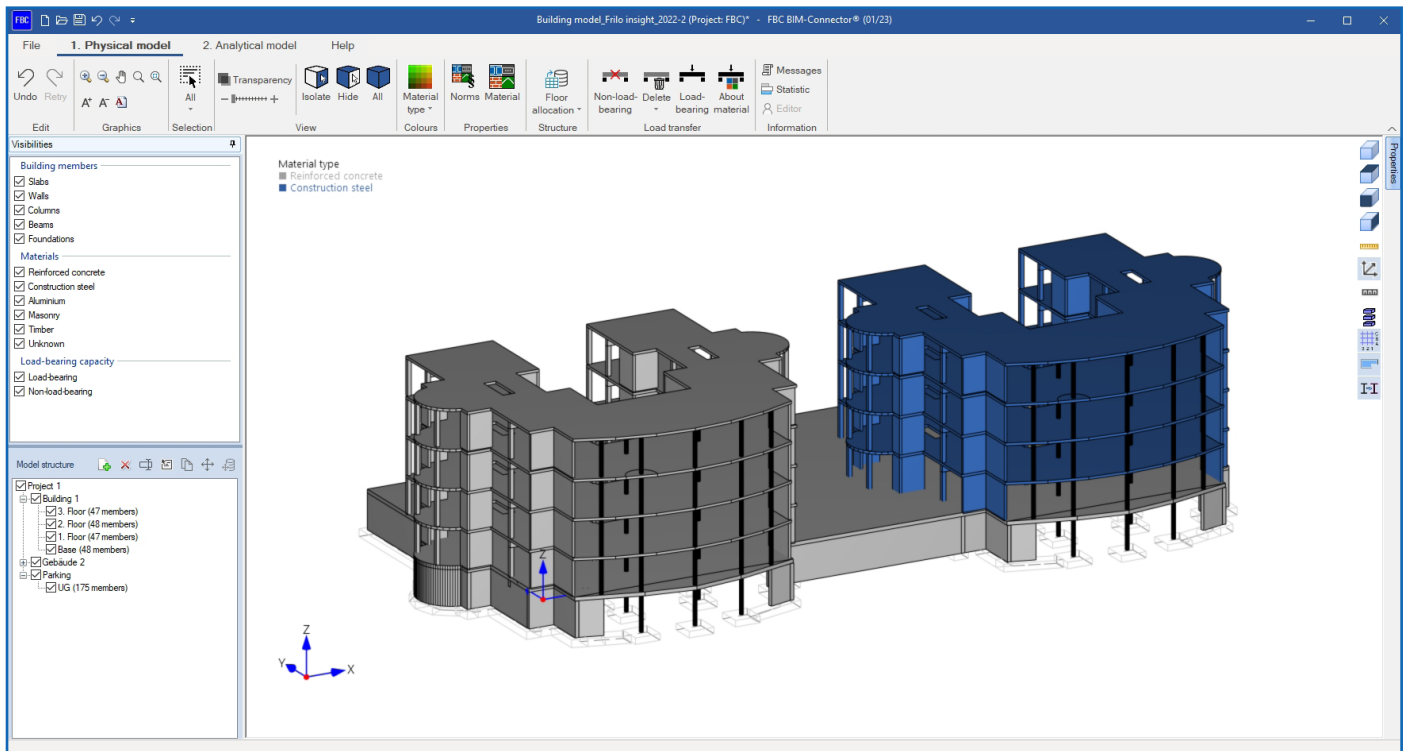


Fig. 1: Example project with two building towers and a common floor slab

Before introducing the transfer of building data to you, it is helpful to point out two special features of the GEO Building Model:

- The first is that only one floor slab can be modelled in GEO for each storey. For this reason, non-contiguous slabs must be connected before the export.
- The second is that foundations are not considered individual components in GEO. Therefore, they must be removed via the function "non-load-bearing" or "remove" in FBC.

Building type 1: Several building towers with a common basement level

The model structure consists of two building towers connected by a common base slab. For clarity, the two parts of the building are shown in different colours (Fig. 1).

Step 1: Structuring the building data

A separate building should be created for each part of the building in FBC in the model structure section (read the BIM article in FRIL0 aktuell 2021-2 (in German), p. 6).



Step 2: Transferring data to the Building Model

Each of the two building parts should be transferred separately to the Building Model. This is the only way to use the model for the horizontal and vertical load transfer. As a consequence, two partial models are created. As usual, the loads in the individual partial models are applied to the floor slabs. Subsequently, the calculation for the vertical and horizontal load transfer can be performed.

Via ▶ File ▶ Import ▶ Load transfer building item, the loads from building 2 can now be transferred to the partial model of building 1 (see Fig. 2). But watch out! If the loads from a partial model change, the forwarded loads must be imported again.

The benefit of working with partial models is that the automatic wind load determination can be used. Therefore, the model can be considered for both, the vertical and the horizontal load transfer. When transferring the horizontal load, it should be noted that only the compression and tension components from the base moment are transferred. If the influence of the resulting horizontal load on the lower storey should also be considered, the horizontal load from the upper storeys must be entered manually in the current versions (an automation of this process is in progress).

In the seismic verification, the user should ensure in addition that the basement is assumed as a rigid basement box, as otherwise the determined equivalent loads resulting from the earthquake with the mass of the basement only have an influence on the building that was entered completely.

Another possibility for the transfer of such buildings could be that the user connects the two unconnected slabs to each other already in the CAD program via a slab strip.

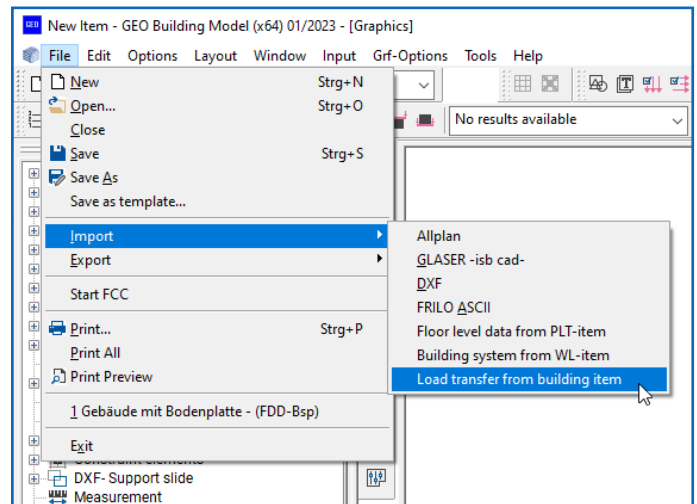


Fig. 2: The „Load transfer from building item“ function - alternatively, you can also find this function in the main menu on the left-hand side.

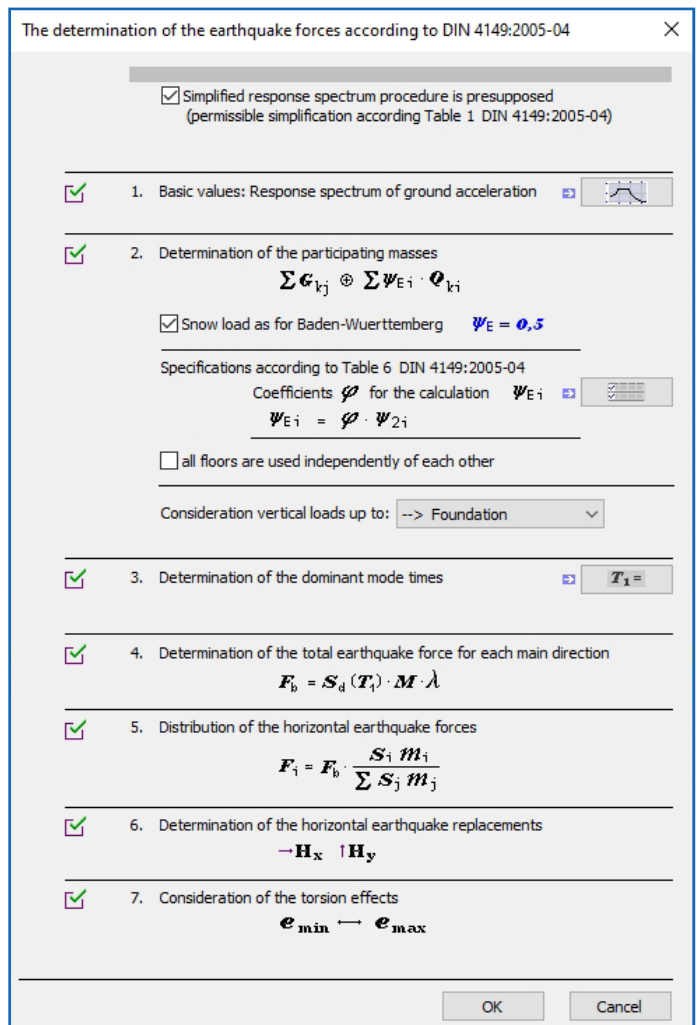


Fig. 3: Dialog „Earthquake“



This slab strip should be decoupled from the rest of the building in the Building Model via a thin thickness area (low self-weight, low stiffness) and additional slab joints.

The advantage of this modelling is the quick determination of the foundation loads, as the entire building with all loads is mapped in a single model. However, the automatic determination of wind loads and seismic loads cannot be used because the wind action area is determined across the slab strip and the centre of mass is not correct for the seismic verification in the upper storeys. Therefore, this model can only be considered for the vertical load transfer.

Hence, model creation via partial models is the preferred method.

Building type 2: With differences in height

For a building with height differences, the slabs should be connected to each other before exporting it. Slabs with the same slab thickness can be connected in FBC via the “Connect manually” function. The first selected slab is automatically moved to the height of the second selected slab and connected to it at this height level.

Even slabs with different slab thicknesses can be connected using the “Connect manually” function. In this case, a thickness region is also created for the first selected slab, however. After exporting the data to the Building Model, you should take a detailed look at the transition area. If necessary, an additional beam and/or a slab joint must be inserted here.

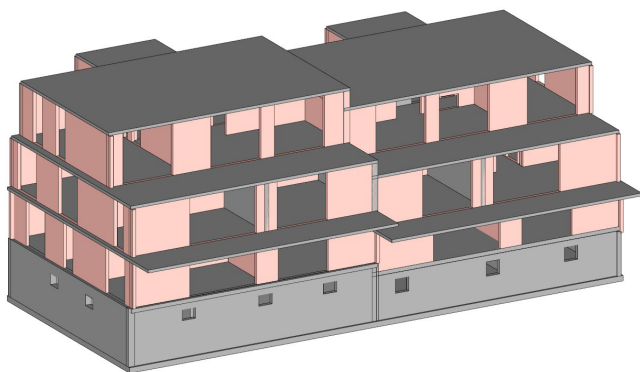


Fig. 4: Building with a jump in height

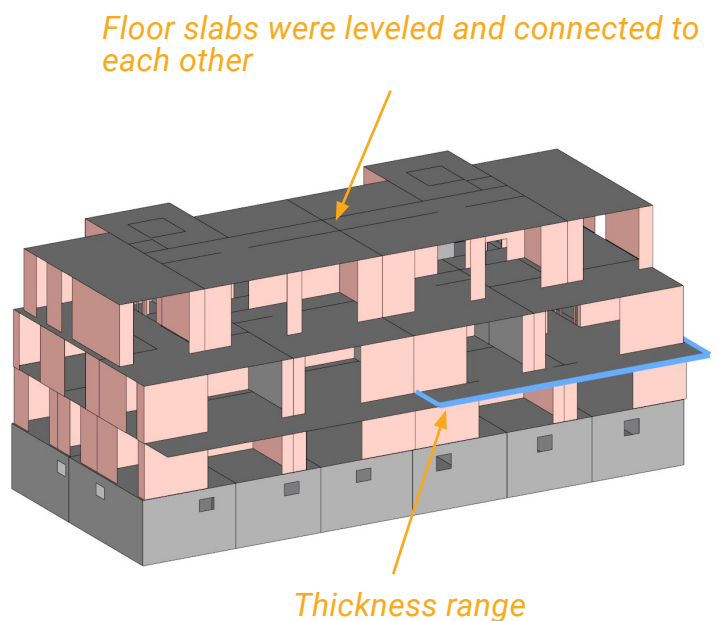


Fig. 5: Slabs connected manually

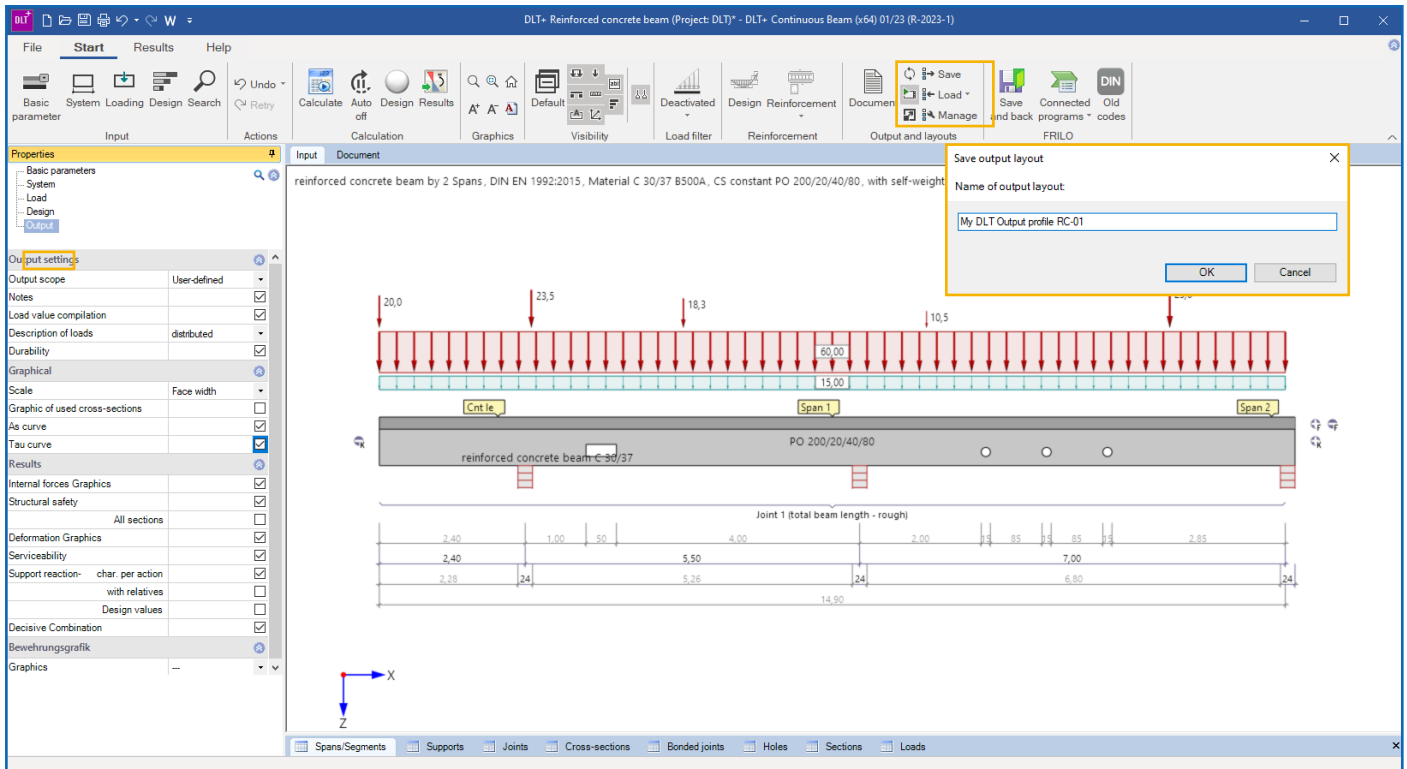
Authors: Tamara Schäfer, Horst Frank



Saving and managing Output Profiles

A way to work more efficiently

The Output Profile allows you to determine the scope and content of an output document according to your wishes. It is advisable to save frequently used Output Profiles permanently and select them by mouse click when required. We explain to you how you can use this function.



Find a concise name for saving a customized output profile.

In the current PLUS versions of our programs, you will find this function in a rather inconspicuous position in the toolbar on the tab “Output and Layouts”. It allows you to save, load and manage Output Profiles you have once defined.

First, define an Output Profile in the menu tree on the left. To make this profile available for other items in the same program, click on “Save” in the toolbar in the “Output and Layouts” section and enter a descriptive name for the profile in the dialog that is displayed. As soon as an

Output Profile is saved, the functions “Load” and “Manage” become enabled. When you now open another item with the same program, you can take over the saved profile for the current item via the “Load” option. The “Manage” function allows you to delete saved profiles or rename them.

Note: We plan to provide these functions also directly in the left menu section below the Output menu item in future program versions.

Author: FRILO



No free licence available?

This is how you optimise your licence management

FRILO licences offer a decisive benefit: they allow the installation of FRILO programs on any number of computers. However, the simultaneous use of a program is only permitted for the number of users for which a licence is available. We show you how to identify possible bottlenecks in licensing and address the problem.

No free licence available. This message appears when more employees try to work in a FRILO program than there are licences for that program (Fig. 1). So what to do when there are increased bottlenecks in the simultaneous use of a program?

To do this, call up the FRILO configuration in the FRILO Control Center via the cogwheel in the top left-hand corner. On the "Licences" tab, you will find the button "Licence Manager". On the tab "Failed Web Licence Checks" you will get an impression of whether and how often collisions in the use of individual programs occur. An example: In Fig. 2, you can see the failed attempts to launch the DLT program. As there is only one licence for this program and it is already being used by an employee (workstation 1), access to DLT was refused to workstation 2 at 11:55 am. The start and end date options and the program filter can be used to refine the overview according to your criteria.

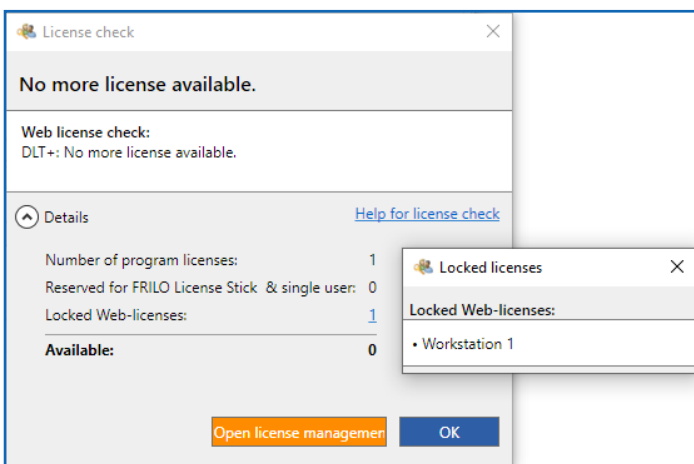


Fig. 1: The message appears when the number of employees who want to start a FRILO program at the same time exceeds the number of licenses for this program.

Additional licences

If you feel that the collisions occur too often, you may need to purchase additional licences. In this case, you are welcome to contact our sales department by e-mail vertrieb@frilo.eu without any further obligation.

Get an overview

First of all, you should get an overview of the frequency of cases in FRILO's Licence Manager.

Author: FRILO

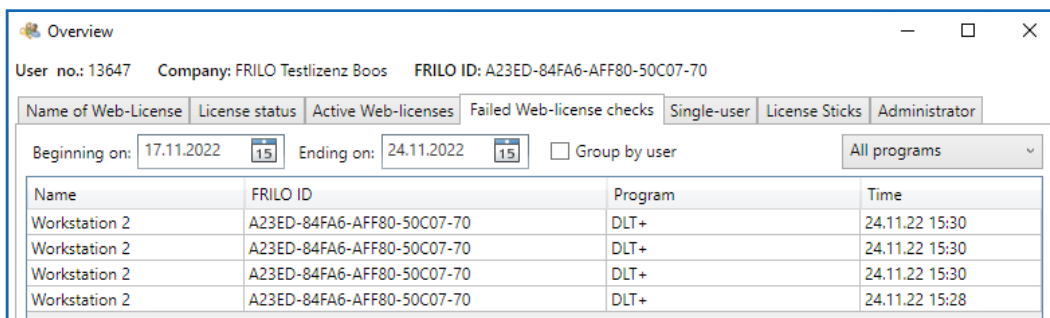


Fig. 2: The license manager logs the failed attempts to start a program.



“Digital transformation of the construction industry only succeeds with common standards”

On the way to achieving the ambitious climate targets, it will be important for the construction industry to exploit the potential of digitalization. In this interview, Ines Prokop and Markus Gallenberger discuss the influence of the design phase on sustainable construction, why the Structural Analysis Format (SAF) is good for the BIM working method and why structural engineers benefit from the newly formed alliance “Nemetschek Engineering”.

Good afternoon Ms. Prokop, good afternoon Mr. Gallenberger. The construction sector was responsible for around 40% of global CO₂ emissions in 2021. Sustainability and resource conservation will have to strongly shape the future of construction in order to achieve the ambitious climate targets. What strategies can be used to reduce the impact of construction measures on the climate and the environment?

Gallenberger: Sustainable and efficient construction can be implemented wherever the life cycle of a building is considered holistically. This cycle begins with the production of the building materials to be used, encompasses planning and the actual construction process, but also the operation, renovation and deconstruction of a building. Digital solutions are what make this holistic approach possible in the first place. That is why sustainable construction and digitization go hand in hand and complement each other.

With their digital solutions, the members of the BVBS represent the entire value chain of the construction industry. This also includes providers of software systems for structural calculations. What contribution can software-supported structural design make to sustainable and resource-efficient construction?

Prokop: Software-supported structural design is an essential component in the material-efficient development of sustainable structures. In a solid structure, over 50 % of the CO₂ emissions generated by the construction process are

attributable to the supporting structure. This means that there is enormous potential for CO₂ savings in the design of load-bearing structures. In the past decades, we have forgotten how to build in a resource-efficient way because we had to do it quickly. Climate targets and rising prices for building materials such as steel and reinforced concrete are now forcing structural engineers to use raw materials more sensibly again. Software for structural design is a basic prerequisite as a tool for finding the right balance between material efficiency and sustainability on the one hand and an economical construction process on the other.

Now, not only the structural engineers but also the architects are involved in the planning phase. In order to make planning as efficient as possible, it makes sense to optimize the cooperation between these players. How can this be achieved in the future?

Gallenberger: To bring the disciplines together, digital, software-supported solutions can be used to create an environment in which the intelligent exchange of data between architects and structural engineers is largely automated. Used correctly, the various trades can work together more efficiently, precisely and flexibly in accordance with the guiding principle of the BIM working method – especially if the solutions support OPEN-BIM.

Prokop: That's why we at BVBS have been advocating OPEN-BIM and good, lossless data exchange formats for years. Via common project platforms, so-called Common Data



Environments, all project participants have access to the same model, which leads to more transparency and improves the cooperation of the planners.

what concrete solutions does FRILO offer to help promote BIM as the working method of the future?

Gallenberger: The BIM-Connector was developed by FRILO to optimize the collaboration between architects and structural engineers. The OPEN BIM process allows CAD models to be reliably transferred to the FRILO solution, where the model can be cleaned up accordingly for the structural calculations. Structural engineers therefore no longer have to reconstruct the modeled building in small steps in the structural analysis software, but can import the model directly. Because the structural engineer can start analyzing the model immediately, the integration of the BIM Connector represents an enormous relief, especially in time-intensive project phases.

Does SCIA also have such a solution in its portfolio?

Gallenberger: SCIA AutoConverter can be used to automatically convert a 3D structural model from any CAD software into an accurate analysis model. In the process, changes to the structural and analysis models can be tracked and managed by both architects and engineers. The solution maximizes data reuse and minimizes manual handling throughout the process. Time-consuming and sometimes tedious redesign tasks are eliminated.

Project participants can use the Structural Analysis Format, or SAF for short, as a data exchange format during the planning phase. What is SAF and how does it differ from other exchange formats?

Prokop: SAF is a comparatively young, provider-neutral data exchange format that simplifies

and promotes the direct, loss-free exchange of analysis models in structural design. Thanks to the absence of data losses during transfer, time-consuming remodeling on the part of the structural engineer is no longer necessary. The format is based on Excel and is therefore particularly user-friendly, practical and intuitive because civil engineers are familiar with Excel. Another advantage is that SAF generates significantly smaller amounts of data than, for example, IFC.

SAF can therefore contribute to advancing BIM in structural design. But which hurdles have to be overcome to increase the acceptance of SAF?

Prokop: First of all, it must be noted that the circle of software providers that can import and export SAF has expanded significantly in the last two years. Nevertheless, many users are still hesitant. This is certainly related to the fact that bridge construction as an important application area has not been sufficiently considered so far. This must change. In order to get more users excited about the exchange format and to improve user-friendliness, we are also planning to establish a working group in which we would like to bring together software providers and software users. Experience has shown that the best solutions are created when developers and users are in an exchange. In the medium term, SAF is also to be certified in order to create more trust in the exchange format among the user community.

Why is SAF especially beneficial for FRILO and SCIA users?

Gallenberger: Since the format is specifically tailored to the needs of structural engineers, both SCIA and FRILO users benefit in their structural analysis. The high degree of interoperability provides a smooth data exchange between both software systems. Some direct interfaces have already been implemented. For example, the transfer of building data from the FRILO



building model GEO to SCIA Engineer for earthquake verification is based on SAF. Other useful interfaces will follow soon to promote the lossless data exchange between both solutions and to consider all facets of structural design.

SCIA and FRILO will intensify their joint cooperation this year. How did this decision come about?

Gallenberger: We would like to use synergies to be able to support our customers even better in their projects. SCIA and FRILO already complement each other perfectly. While users can clearly display complex 3D models with SCIA Engineer, FRILO convinces with simple, time-efficient static calculations of individual components. In combination, both programs cover a large part of the real applications. Thus, structural engineers have an accurate solution at hand for every challenge in their daily work. If further direct interfaces are developed in the future in the sense of interoperability and automate the loss-free exchange of data, users of both solutions will benefit from completely new, extremely practical synergy effects.

With what medium- and long-term objective was the cooperation intensified?

Gallenberger: The aim of the cooperation is to provide our customers with a comprehensive overall package of structural representation and calculation options that is unparalleled on the market. For this reason, we recently founded the Nemetschek Engineering, which as it stands today consists of SCIA, FRILO and DC-Software. The close relationships in the areas of software development, service and product management will expand existing interfaces between the three software solutions and create new, beneficial transfer opportunities.

Ms. Prokop, what are your hopes and expectations for the collaboration between the two software houses?

Prokop: I am always pleased when different companies intensify their cooperation, because the digital transformation of the construction industry can only succeed with common standards and optimized interfaces. There is no one program on the market that solves all the demands and challenges of the construction industry. In this respect, I hope that the close cooperation will result in an optimal exchange of data between the solutions and consequently satisfied users.

The interview was conducted by: Tim Kullmann

About the person



Ines Prokop has been Managing Director of Bundesverband Bausoftware e.V. since May 2020. Since 1993, BVBS has been pursuing the goal of improving the performance and innovative strength of the construction industry through the use of construction software. In order to increase the quality of the digital transformation, BVBS has been conducting certifications for the data exchange of software applications for years.



Markus Gallenberger took over as CEO at FRILO Software GmbH in December 2018. Since April 2022, he has also held the office of CEO at the Belgian software company SCIA. Both software houses belong to the Nemetschek Group and offer calculation programs for structural tasks and structural design.





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