

New Features in TSE-Update

- Launch of website https://www.itegsoftware.com
 - Latest TSE version available for download
 - Download of instructions, examples, etc.
 - Will be extended in the future
- Change of the filebased TSE project management
 - Migration of existing projects is required only once
 - A project is saved as a *.TSEp file (as e.g. MS Word). It can be saved at any place in the system/network
 - Open your files by a double click
- TSE calculation
 - Wind speed can be adjusted
- SIA calculation
 - New index tab with live calculation
 - More calculation fields
- TSE report
 - Optimised layout to provide a better overview
 - o Optional: insert a personal header
 - Optional: insert comments in the footer
 - o Available in German, English, Italian
 - Possibility to copy to the clipboard
 - Possibility to hide a sensor type
- TSE statistics online transfer
 - Mark TSE projects for ITEG online transfer of anonymised sensor data
 - Currently in the test phase and inactive!
- General improvements /corrections
 - Rinntech Arwilo can be started in TSE
 - o and much more!



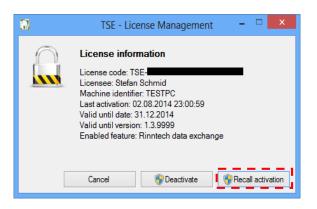
I. License Information

After the prolongation of your ITEG TSE license, there is an additional online activation required, once per workstation:

Please start TSE and the license management at the menue point "Tools" – "License Management..."

D		Tree Stability Evaluation	- 🗆 🗙
Project	Tools ?		
	Legancy Project Control		
	License Management		
	ARWILO for TSE		
	Check for Online Update		
	Ontions		

By clicking "Recall activation" you recall your current license information online and update it in your TSE installation.



II. ITEG Software Online

The new website <u>https://www.itegsoftware.com</u> provides you the latest information on TSE. This will be expanded, so just have a look from time to time on the website to check the news.

Currently, you have the following services available:

- Download of the latest TSE version
- Download of instructions, examples etc.
- License activation service of TSE



ITEG-Software Download About

Log in

Tree Stability Evaluation

Highlights

- · Calculations for stability and safety against fracture in one examination process
- Clear and understandable safety evaluation
- Systematic, engineering-level procedures
- Transparency throughout the process, since all interim values are clearly evident
- · Tried and tested in practice and adjusted to measuring instruments for tensile tests

Tree Stability Evaluation (TSE) is a **calculation programme for evaluation of stability and safety against fracture** of trees by means of tensile tests. With the help of the TSE calculation programme the sensor-measured data collected from the tensile test are calculated in relation to the estimated wind load in order to obtain safetyrelated information about the respective tree

III. Databased TSE Project Management

From TSE version 1.4.x project management was separated from the central TSE project control. This means for you as a user, that a project can be saved as a e.g. MS Word document in a *.TSEp file in the Windows file system and that you can open it in the Windows Explorer. This improvement is based on the feedback of the TSE users, who were looking for more flexibility in the project management (copy, transfer etc.).

That's why TSE does not start the TSE project control first, but the window below. There, you can select between "New", "Open", "Save" etc. your TSE projects.

8	Tree Stability Evaluation	
Project Tools ?		
New		
Open		
Close		
Save		
Save As		
Exit		



If you have saved projects in the TSE project control of older TSE versions, you will receive the following note after an update on the latest version.

Tree Stability Evaluation	
TSE found some projects in the TSE Project Control, which were not exported or deleted yet. Hint: With TSE Version 1.4 each project is stored in a single file, which could be loaded and saved into your filesystem. In earlier Version, TSE Project Control did this for you in the background. To migrate existing projects, please export or delete all of your projects. Would you like to start TSE Project Control?	
<u>Ja</u> <u>N</u> ein	

Please start the export of all existing projects by a click on "Ja" / "Yes". This note appears when you start TSE, until all projects have been exported or have been deleted from TSE project control.

In this window, single projects can be exported or deleted by a right-click on the respective line or on the menu point "Project".

	TSE - Projectcontrol		×
Project Options			
Available projects to export	٩		😂
Project name	4	Created	Last change
Testprojekt3	Export to TSE Project Delete	21.08.2014	26.10.2015 19:29:20

Please note: When you export a project to a new file path, please note the place where you save it, so that you can find the project in your filesystem again. Choose the file name you want. After a successful export or after deletion, the project disappears from the project control list. As soon as the list is empty, you will no longer receive any notes when you start TSE.



If you want to open an exported TSE project file, you can either use the TSE menu point or you double click on the file in the Windows Explorer.



Test Platanus_20151008.TSEp TSE Project 18,4 KB



Testprojekt2_20130513.TSEp TSE Project 171 KB



Test_20141204.TSEp TSE Project 146 KB

Testprojekt3_20140821.TSEp TSE Project 171 KB

IV. Expanded TSE Calculation Facilities

At the factor description list, wind speed can now be adjusted individually and be adapted according to specific local circumstances.

Factor description											
			Terrain simu	ation					Tree species		
Wind gust factor	1,2]	Small city				~		Platanus spec	~	
Tree swinging factor	1,4]	Terrain expon	ent			0,2		Yield strength under compression	2,7	kN/cm²
Crown area (Arwilo)	174	m²	Height laminar	wind lay	yer	36,9 m/s in	305	m	Elasticity limit	0,43	%
Anchor point distance	40	m	Air pressure	1000 n	nb	Height dummy load/tree	10	m	Drag coefficient	0,25	
Anchor height correction	0	m	Temperature	10 9	°C	Arwilo-Force center height	10,6	m	Tree height	18	m

Additionally, there is a new index tab for SIA calculation. This was changed to underline a clear separation between different calculation methods. As soon as you have filled in all data in "Factor description", you can calculate the theoretical breaking security according to the optimised SIA method.

Data factor/inc	lination/tension Result uprooting/rupture SIA calculation	tion Rej	port							
- Abstract s	safty factor against rupture following SIA calcula	tion —								
(Attention,	result is an theortical number, not using without expert c	heck!)								
Step no.	Text	Set h	eight	D trur	ık	T bar	k	D rot		Abstract result
1	Trunk, 1 m hight	1	m	120	cm	0,5	cm	0	cm	17,35
2	Trunk, 2,4 m hight	2,4	m	95	cm	0,5	cm	0	cm	10,01
3	Trunk, 3,7 m hight	3,7	m	70	cm	0,5	cm	0	cm	4,70
4			m		cm		cm		cm	



V. New Report Options

In the new TSE release, you can insert a personal header into the TSE report. Just start TSE and then go to the menue point "Tools" – "Options..." and start the option dialogue.

	Tree Stability Evaluation	- 🗆 🗙
Project Tools ?		

In the following window, you can set the option "Company information address/logo". This information is saved per individual workstation.

To insert your personal data, please insert your company address (4 lines at maximum) Additionally, you can insert your logo (recommended maximum file size: 300x90px). If you insert a logo with another size, it will be automatically adjusted, eventually with quality losses.

	Options	×
Internal data path Check for updates	C:\Src-SVN\TSE Testdaten\TSEData] 🚺
Company information		
Address	Sachverständigenbüro Siegert Raiffeisenstraße 7 90518 Altdorf bei Nümberg Tel: +49 (0)9187 90733540 Fax: +49 (0)9187 804982	
Logo (300px * 90px)	BODO SIEGERT Sachverständigenbüro	
	Ok Canc	el

Based on the example data above, a personal header could look, for example, like the header below.





There are also two new text notes in the report footer. You can select them optionally in the menue "Report".



Additional infor	mation			
Tree No.	1234	Report date	Freitag , 1. Januar 2016	
Report No.	5678	Inspector	M. Mustermann	
Show	$\ensuremath{}$ Brake security decline $\ensuremath{}$ Theoretical rot diameter	Security after	pruning 🔲 Footer short 🗹 Footer long	
Project status	\blacksquare Finished \square Transfer statistical data to ITEG			

Optional text "Footer short":

Note: All sensor data, measurement and calculation results have been checked for plausibility by the author of this expert paper. According to Wessolly, a safety factor of at least 150 % should be achieved.

Optional text "Footer long":

Note: All sensor data, measurement and calculation results must be mandatory checked for plausibility by tree security experts. Verification of results by using independent measuring systems is advised ("ITA Integrative Tree Assessment"). According to Wessolly, a safety factor of min. 150 % should be achieved.

Safety against uprooting: The generalised tilting curve by Wessolly was reviewed by the author in own tests (see www.iteg-network.com - Bodo Siegert, 2013: Comparative Analysis of Tools and Methods for the Evaluation of Tree Stability). The detected deviation of approximately 10% (at 40% tilding load) is acceptable when analysing natural structures. Best load test results are achieved at a tilding angle of approx. 0.25°, as long as the anchor points have sufficient strength.

Safety against fracture: The author could not fully confirm the Stuttgarter Festigkeitskatalog for tree stability tests. From a professional point of view, results should be treated critically. Results of the SIA calculations and results of structural strength through outer fiber strains have to be mandatory checked for plausibility by other measurement systems, for example drilling resistance measurement with RESISTOGRAPH[®].

After the generation of the report, you can select German, English and Italian as report language.

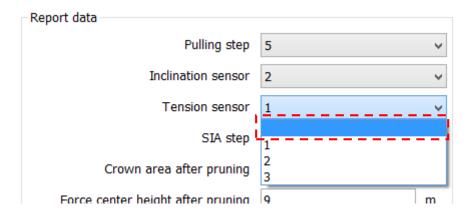
			TSE - Report Te	st Platanus	_ 🗆 🗙
Report	Language				
BODO SIEGE Bedrevalledge	English German Italian	orf bei Nümberg ac +49 (0)9187 804982 Baum Nr. 1234	Report Nr. 5678	Datum: 01.01	12016 Gutachter: M. Mustermann
G	rt: eländefaktor alpha: odengrenzschicht:	Kleinstadt 0,2 305 m		Baumhöhe: Durchmesser Stamm: Kronenfläche:	18 m 120 cm (1 m) 174 m ²

If you want to copy the report to another document, there is a new function available to copy the report to the clipboard.



0		TSE - Report Test	Platanus	- 🗆 🗙
Report Language				
	of bei Nürnberg : +49 (0)9187 804982			TSE Tree Stability Evaluation Software for Tree Stability Tests
Save as	Baum Nr. 1234	Report Nr. 5678	Datum: 01.01.2016	Gutachter: M. Mustermann
Exit	dt	E	Baumhöhe: 18 m	

In certain cases, if you do not want to show specific sensor data, please select the new space in the respective sensor zone.





Example for the new report layout including header and long version of footer text.

Inspector: M. Mustermann
18 m
120 cm (0,5 cm bark, 1 m)
174 m²
enter: 31,66 m/s
1,2
vr. 1,4
1000 mb
10 °C
1,23 kg/m³
278,95 kNm
ing: 150 m²
ning: 9 m
sion vs Load
00 3000 4000
oad [kg]
re" windspeed is Bft. 11 (31,66 m/s) .
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Initiality from the second state of the second state of the state of structural strength through outer fiber strains have to be mandatory or could not fully confirm the Stuttgater Feedgleinkatalog for the stability tests. From a professional point of view, results should be treated critically. Results of the SIA calculations and results of structural strength through outer fiber strains have to be mandatory or galaxiability by other measurement cystems, for example diffing resistance measurement with RESISTOGRAPH®.



VI. TSE Statics Online Transfer

In the new TSE release, we have implemented a new, voluntary transfer option of anonymised TSE projects statics data, to further improve the TSE stability calculation. Currently, TSE projects can only be marked for online transfer, however, the online transfer is still inactive. The active transfer will be implemented in a future TSE version.

If you want to support ITEG with your anonymised measurement data, you select in the menu "Report" the following checkboxes:

Additional information				
Tree No.	1234	Report date	Freitag , 1. Januar 2016	
Report No.	5678	Inspector	M. Mustermann	
Show	🗹 Brake security decline 🗹 Theoretical rot diameter 🗌 Security after pruning 🗌 Footer short 🗹 Footer long			
Project status	✓ Finished □ Transfer statistical data to ITEG			

If you place a check mark in the box "Finished" you mark that the project work is finished. This mark is for you and your personal project status documentation. Moreover, it will be compulsory for the future transfer of projects to minimise data transfer of incomplete projects.

If you agree with the transfer of statics data of a certain project, please place a 2nd check mark in the box "Transfer statistical data to ITEG".

The online transfer is encrypted and no specific project data are transfered (e.g. project name, name of the tree expert etc.). You will receive a specific list on data transfered when his function will be completely implemented.

VII. • General Improvements / Corrections

If you have installed the "Rinntech Arwilo for TSE" software on your PC, you can now start it in TSE:

