



Talren v6

Talren v6 allows for the verification of the stability of **natural slopes, embankments, dams, dikes, and retaining walls**, taking into account various types of reinforcements

Geotechnical structure stability analysis

Proven analytical methods

- Limit equilibrium calculation using Bishop, Fellenius or perturbation methods.
- Consideration of hydraulic conditions.
- Consideration of seismic loads using the pseudo-static method.

The contribution of failure calculation

- This method, based on the theory of failure calculation (J. Salençon) for logarithmic spiral arcs, allows for numerous extended applications.

Specific treatment for each type of reinforcement

- Combination of different failure criteria for the soil and inclusions working in tension, compression, shear, and bending to evaluate the maximum force that can be mobilized in the reinforcement.

Current standards and recommendations

- The Talren v6 software incorporates the specifics of the NF P 94 270 standard (October 2020) for the calculation of nailed walls and the specifics of NF P 94-281 standard for the retaining walls.

An ergonomic interface

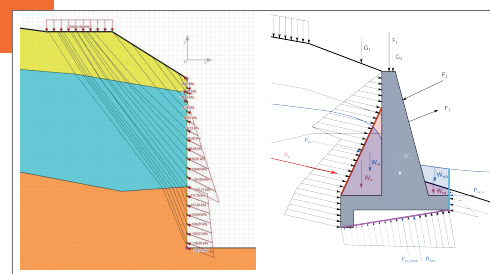
- Management of different execution phases and calculation situations of a project.
- Reading of Plaxis 2D and AutoCAD files (in dxf format).

Retaining wall stability analysis

General, external local, and internal stability

Talren v6 allows for the analysis of general, external local, and internal stability issues of gravity walls, L or T-shaped walls with or without footings, reinforced concrete cellular walls or gabion walls (rockfill) or masonry walls. The wall justification is conducted in accordance with the NF P 94-281 standard.

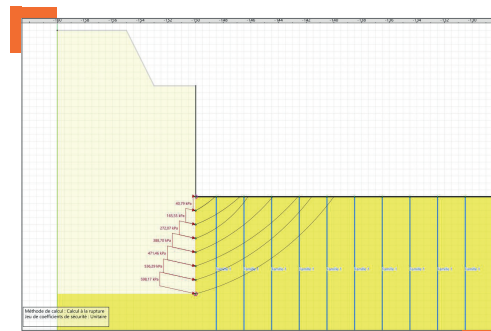
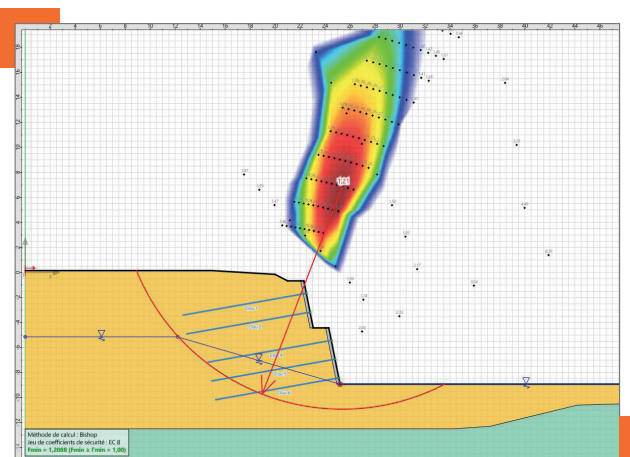
The action combinations required by Eurocode 7 can be generated automatically with the possibility of defining custom action combinations. Numerical justifications are carried out for each combination and presented in detail. This additional calculation module is available as a paid option.



Active and passive earth pressure calculation module

This module exploits the capabilities of the kinematic method of failure calculation to automatically adjust the limit active or passive pressure diagrams along a vertical or inclined line placed anywhere in the Talren model.

These diagrams can be used as input data for the calculation of a flexible retaining walls (using K-Réa) or rigid retaining walls (using Talren).





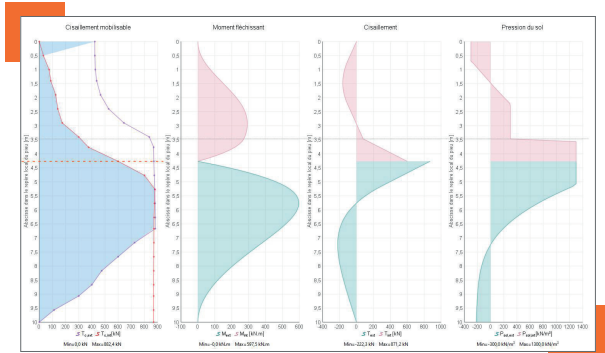
Talren v6

STABILITE GEOTECHNICAL STRUCTURE STABILITY ANALYSIS

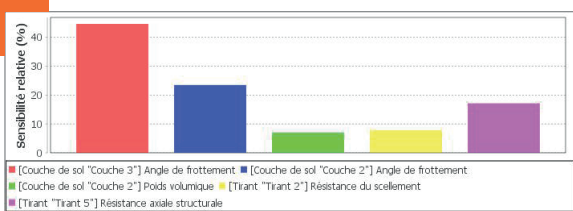
Additional modules

Talren v6 includes a new optimized calculation kernel, several new features, and additional modules to extend the application's capabilities.

- « **Pile** » module: this module allows for a more refined estimate of the resistant contribution along a representative reinforcement element type "nail" like a pile, an inclusion or a barrete working on flexural-shear. The calculation is based on an elasto-plastic "p-y" model considering the multilayer nature of the soil.



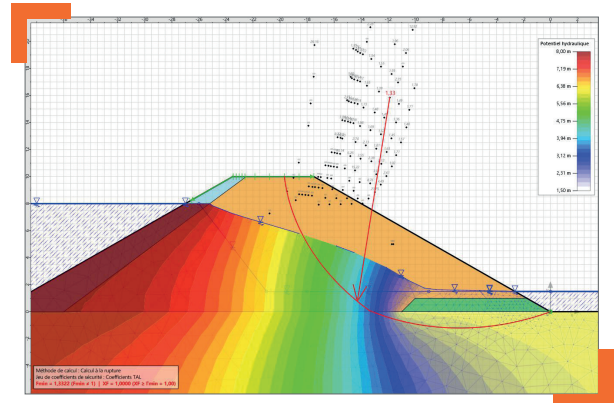
- « **Sensitivity** » module : this module provides the ability to automatically conduct sensitivity studies to evaluate the influence of different model parameters on the stability of the analysed structure. It is also possible to conduct a reliability analysis that involves quantifying safety in terms of reliability index or failure probability (analysis based on the RSM method).



MINIMUM REQUIRED CONFIGURATION

- 1.5 GHz or faster processor with at least 2 cores
- 8 GB of RAM or more
- Minimum resolution of 1366x768
- USB port
- 1 GB of available disk space
- Windows 10 or 11, 32 or 64-bit

- « **Flow** » module: this module allows for an integrated calculation, under steady-state conditions, of the interstitial pressure field to be considered for stability analyses. The calculation is based on a numerical solution of the Laplace equation considering the multilayer and anisotropic nature of the soil.



- **Internal stability of a nailed soil mass:** Talren v6 now allows for specifying and/or automatically adjusting the head forces of nails necessary for verifying the internal stability of a nailed soil mass, in accordance with the requirements of the NF P 94 270 standard from October 2020.
- **Seismic aspects :** Talren v6 allows for the automatic search for the destabilizing seismic acceleration (the one leading to the limit equilibrium) which can be used as input data for an integrated "Seismic" assistant in the software, allowing for empirical or analytical calculation of postseismic irreversible displacements (Newmark-type model).

