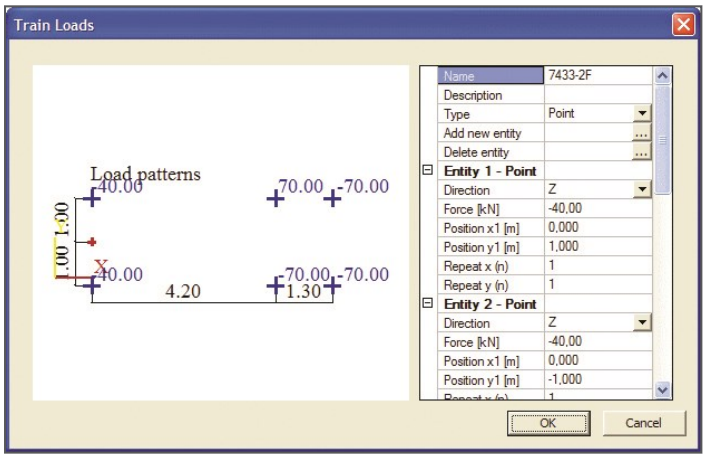
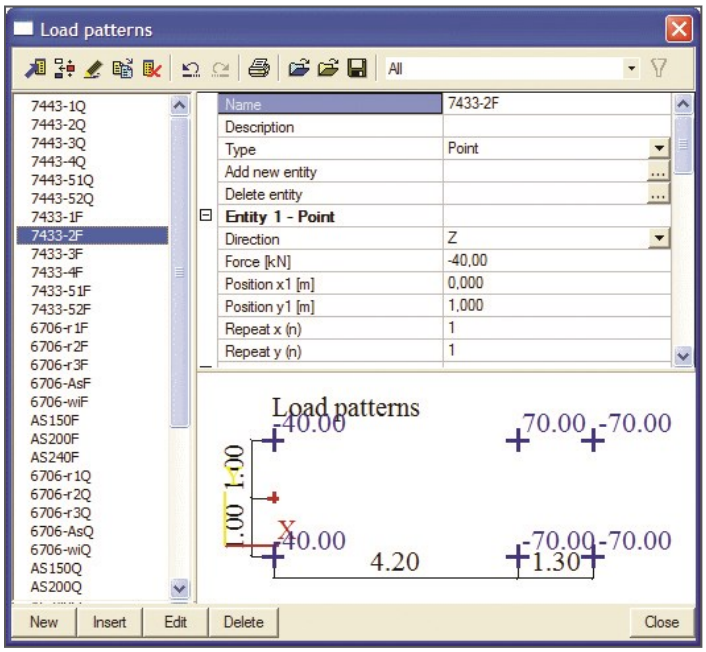
Train loads

esas.04

The esas.04 module *Train loads* allows users to generate quasi- moving loads on slabs:

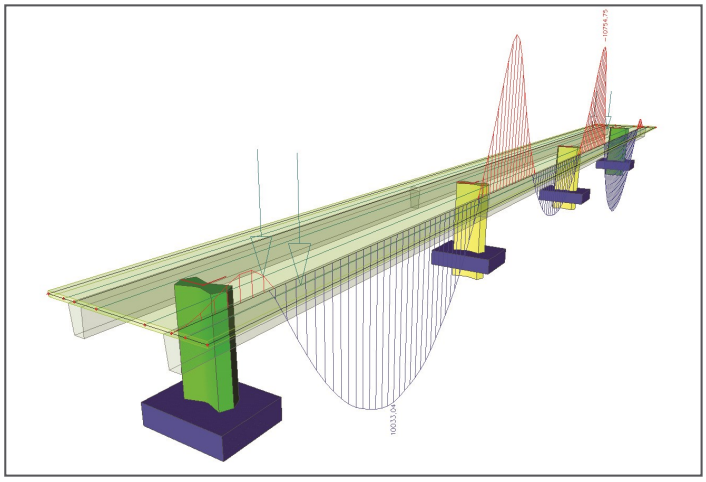
- The passing of predefined groups of forces along a track is simulated as a series of load cases. Each load case corresponds to a location of the load on the track;
- The number of considered positions depends on a user-defined step size;
- The critical position of the load groups may be established as results are presented in the form of envelope functions on the 3D model;
- The loaded slabs may be flat or curved.

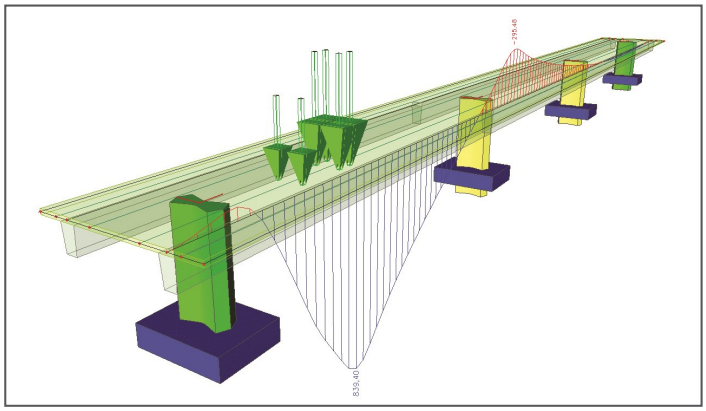




Highlights

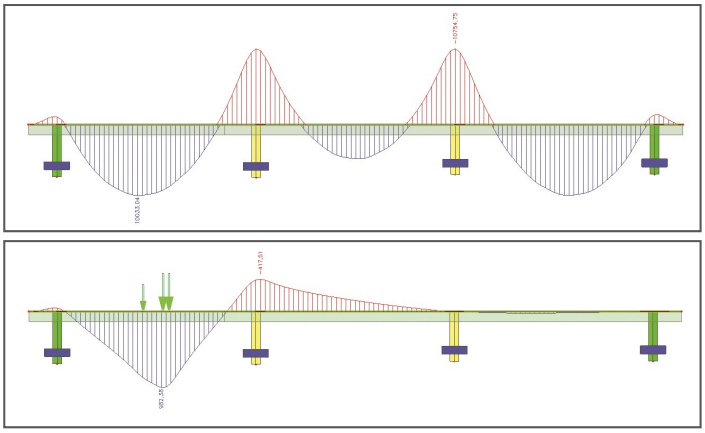
- Generation and repositing of complex groups of moving loads on slabs.
- Arbitrarily shaped trajectories (tracks) may contain straight or curved parts.
- Automatic generation of load cases for each load position.
- Tracking the critical positions for load groups on defined tracks.
- Envelope results provide extreme internal forces, extreme stresses and deformations.





Force groups

- Groups of forces may be contain concentrated and uniformly distributed loads, surface and free loads;
- By default, defined force groups move along the tracks as a "rigid body";
- Turning points may be defined within long force groups, in order to represent a long vehicle turning on a track;
- Groups of forces may be stored and shared among projects;
- A set of predefined force groups according to EN 1991 standard is provided;



Required modules

esa.01