

LUSAS software products

LUSAS engineering analysis software products are being widely used all over the world by engineers to analyse all types of civil engineering structures.

LUSAS Bridge has a wide range of for analysis facilities which includes fundamental frequency, seismic, dynamic, large deflection and fatigue. It is used for all types of bridge design, analysis and assessment from simple grillages through to complex cable-stayed and suspension structures as well as global analysis. *LUSAS Bridge* is ideal for investigating plate girder buckling, U-frame action, local analysis of welds, and solid modelling of box diaphragms. The vehicle load optimisation facility, generating the worst combination of live loads helps to save significant time.

Basic, smart and code-specific load combination facilities allow for manual or fully automated assembly of design load combinations. From these, envelopes, contour, deflected shape plots, and result graphs can be readily obtained for any load case under consideration. Several world wide bridge design codes are supported with more being added all the time.

Results are viewed using separate layers for diagram, contour, vector and discrete value data with bending moments,

shear forces, and deflections. Loadcases are selected on a window basis allowing multiple views with each view displaying results for different load cases. Graphing, animations with AVI output, reinforced concrete slab/wall design, beam stress checking, and output of results to third party software provide a complete analysis capability.

LUSAS Civil and Structural has comprehensive facilities for all types of general civil and structural engineering analysis including seismic, blast, buckling, impact and fire. It can be used for global and local analysis on a full range of structures from buildings through dams and tunnels.

LUSAS Academic is available for use only by educational establishments for teaching and research purposes. For a nominal annual fee, this fully licensed version allows access to either of the *LUSAS* commercial products, and analysis product options, having no restriction on the size of model that can be analysed.

All *LUSAS* software products have an easy to use *Windows* user interface containing an associative modeller for modelling and results processing and a fully integrated solver which can be used

independently if required. Modelling wizards, material and section property libraries, and section property calculators allow rapid modelling. Comprehensive loading facilities cater for all types of loading condition.

Interactive model dynamic facilities allow for analysing linear dynamic response effects on a bridge or structure for a large number of possible train crossing speeds or loading events, and dramatically reduce the analysis solution times associated with traditional analysis methods.

Advanced non-linear analysis facilities provide for soil-structure interaction, modelling of lift-off at bearings and halving joints, time-dependent dynamic analysis, assessment of impact from vehicles, large deflection in cable structures and much more.

For further details, please contact :

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