

PrintBeamFibreStresses.vbs

Description

Stress results at beam fibre locations can currently be outputted in tabular format using the Print Results Wizard. This is done by first setting the beam geometric attribute fibre of interest 'Active' (expand a geometric attribute in the model tree, then right click on the desired fibre name and click 'Set active'), before running the 'Utilities->print results wizard'.

However, because fibre locations and section properties may be different for different beams, only one fibre beam fibre can be set active at a time and so beam stress results can only be outputted for a single fibre at a time. If a model has many different geometric attributes, of which each has multiple fibre locations, then it can be time consuming to run the print results wizard for each individual beam fibre and then collate all of the separate results tables together.

The example script PrintBeamFibreStresses.vbs demonstrates how VB Scripting can be used to automatically output beam stress results to an Excel Spreadsheet for all fibres of all 3D thick beams in a model. Results are initially ordered by geometric attribute, then fibre location, then element, then node. However the 'Autofilter' and 'Pivot table' tools in Excel can be used to easily filter and sort results into the desired format.

To use this script:

1. Ensure results are open.
2. Set the loadcase active which contains your chosen results.
3. Click File->Script->Run Script and select the script file "PrintBeamFibreStresses.vbs". Click OK.

Notes

1. THIS SCRIPT IS NOT PART OF LUSAS SOFTWARE AND AS SUCH IS NOT QUALITY APPROVED OR SUPPORTED. IT IS PROVIDED ON AN AS IS BASIS FOR DEMONSTRATION PURPOSES ONLY.
2. It is important to thoroughly check that results outputted from any script match the expected results. In reference to the above script, this might be done by comparing results with those obtained from the Print Results Wizard in LUSAS.
3. This script is currently limited to 3D thick beams and output of Element Nodal Results. The script should be modified and checked as required for the specific purposes of the user
4. Note that the Opt_IncCoor option at the top of the script can be set to True or False to turn on/off writing of nodal coordinates.