RUB

CASE STUDY

CONVERGENCE STUDY OF A WAVELET-TYPE EXCITATION ON A CONCRETE BEAM

DESCRIPTION:

As part of the wave propagation analysis, implementing numerical simulation depends strongly on some numerical parameters in addition to the structural and material model itself. This case study is aimed at convergence investigation depending on the different parameters and attributes that play very important role getting the right model response in terms of propagating waves.

This project will include applying a wavelet-type excitation (Hanning-windowed toneburst) on a concrete beam and then implementing a convergence study of its response to observe the effect of changing some of the simulation parameters (like the time increment, the element length, the number of elements per wavelength). In the analysis two parameters are restricted by critical conditions which are the time increment and the element length in the model.

REQUIREMENTS:

- First experience with FE software such as ABAQUS
- Basic knowledge of MATLAB.

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