Master's end of study internship offer

Subject

Characterisation of the vibratory behaviour of timber-concrete composite floors in order to evaluate users' comfort.

Context

Among the constructive solutions for the efficient integration of bio-based materials in construction, the use of timber-concrete composite floors has become quite widespread. Although the problems of short and long-term resistance are nowadays fairly well mastered, this is less the case for design methods to assess the vibratory comfort felt by the occupants.

Work in this field has shown large differences in the estimation of dynamic parameters between laboratory tests and *in-situ* measurements, mainly due to the difficulty of reproducing real boundary conditions in laboratory (semi-rigidity of supports, partitions and other effects of the finishing work, etc.).

This internship is part of the pursuit of open lines of work in a thesis that has just been completed. The work can therefore be based on measurements already carried out (to be completed), as well as existing specimens and numerical models.

Missions

Non-destructive and then destructive measurements on timber-concrete composite floor specimens in the laboratory.

Data processing and analysis.

Comparison with numerical model predictions.

Host laboratory

LIMBHA is the research laboratory of the ESB engineering school.

Required profile

Autonomous, capable of taking initiatives, rigorous and attracted by applied research.

Prerequisite

Skills in dynamic mechanics are required. Knowledge of wood material would be a plus but is not essential.

Practical informations

Start: mars 2021

Length: 5 or 6 month (depending of the start)

Location: Atlanpôle, 44306 Nantes

Remuneration: traineeship bonus

Contact

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