



Comportement hystérétique d'un assemblage mécanique de type tige

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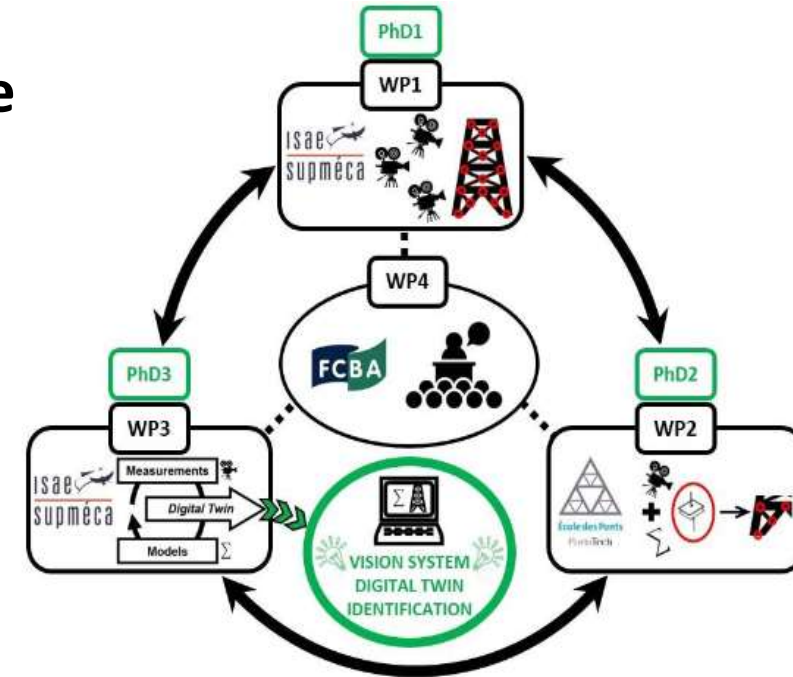
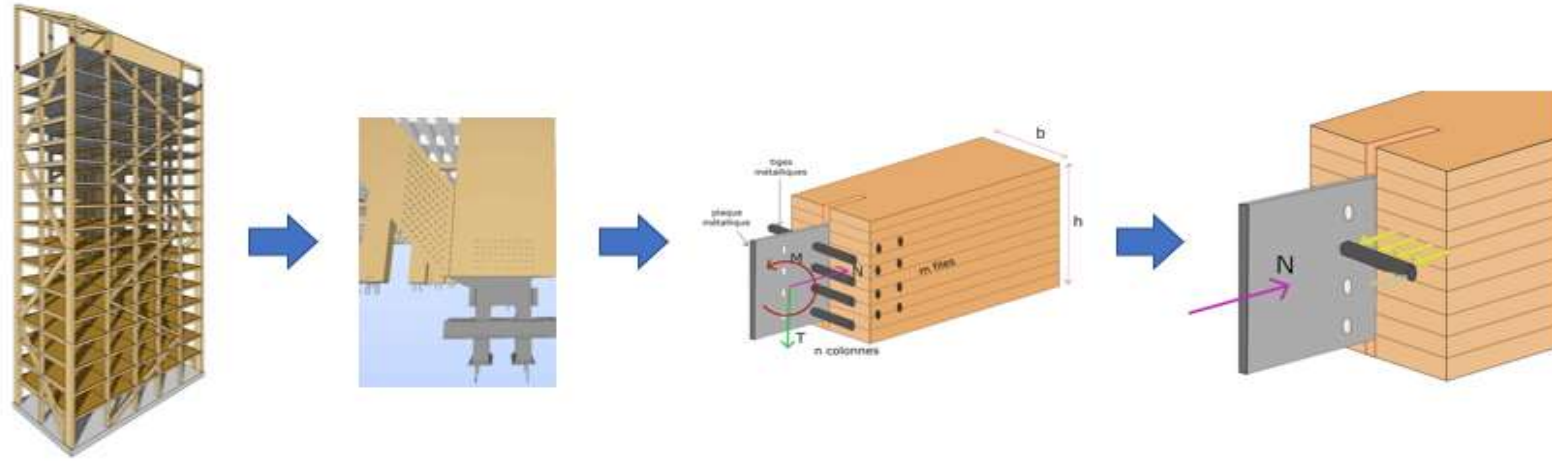


Figure 2: Outline of the project DynaTimberEyes.

B30

Contexte



Identification par camera

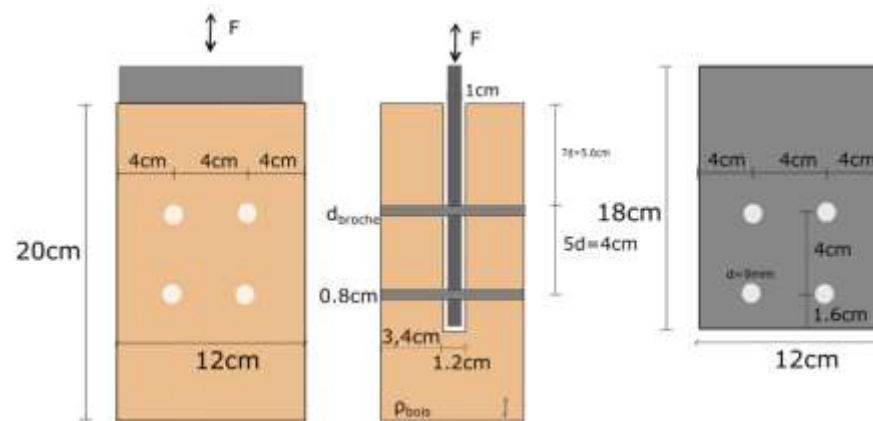


Déplacements
(déformations)

Comportement mécanique

σ^* (Pa), ϵ , F (N), u (mm),
 η (amortissement)

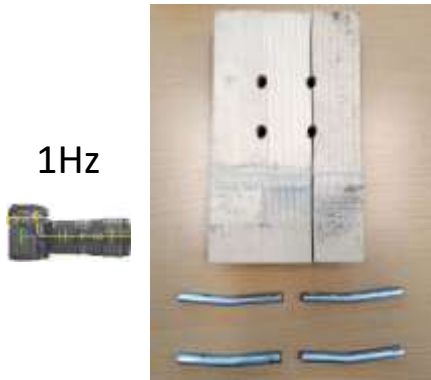
Hystérésis



Tests effectués

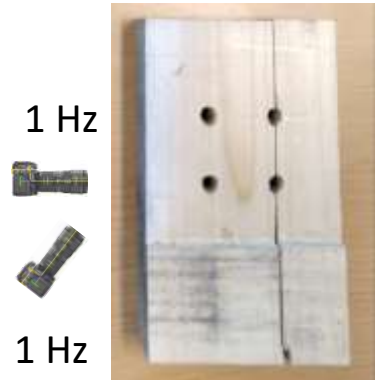
OB1

$w = 10 \%$
 $M = 763 \text{ g}$
 $\rho \sim 414 \text{ kg/m}^3$



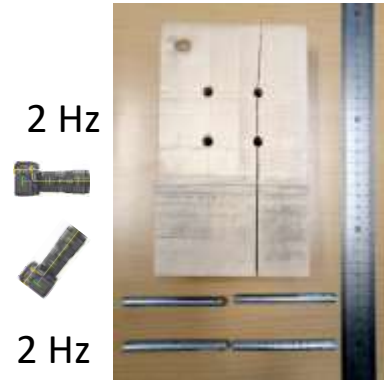
OB2

$w = 10 \%$
 $M = 730 \text{ g}$
 $\rho \sim 393 \text{ kg/m}^3$



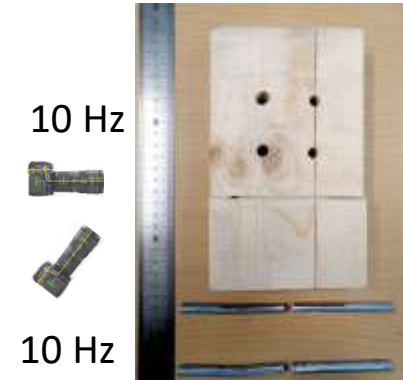
OB3

$w = 10 \%$
 $M = 888 \text{ g}$
 $\rho \sim 484 \text{ kg/m}^3$



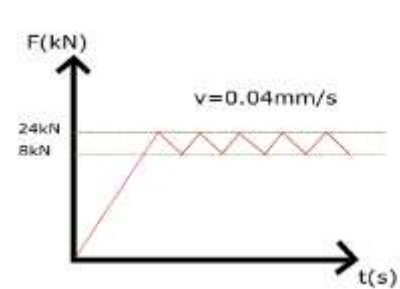
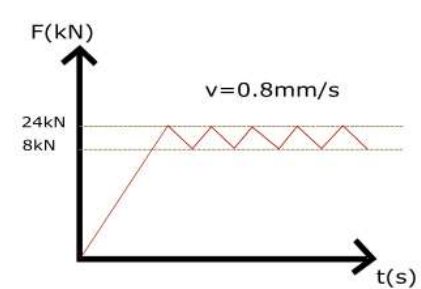
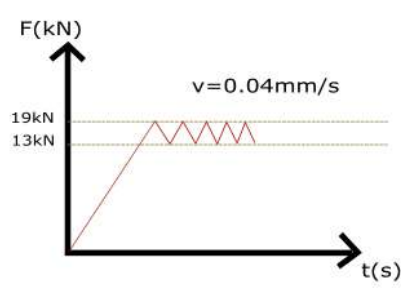
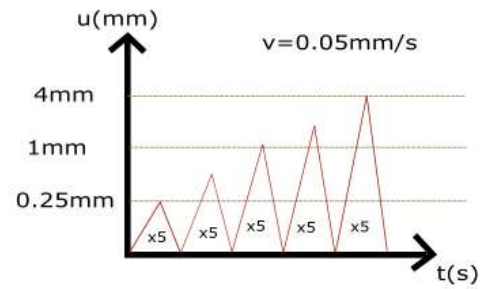
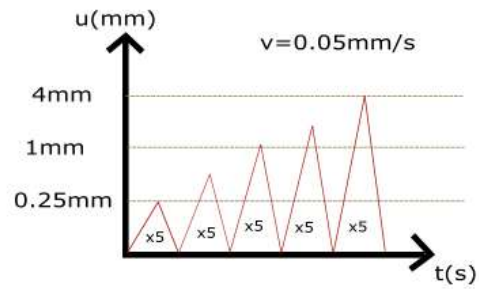
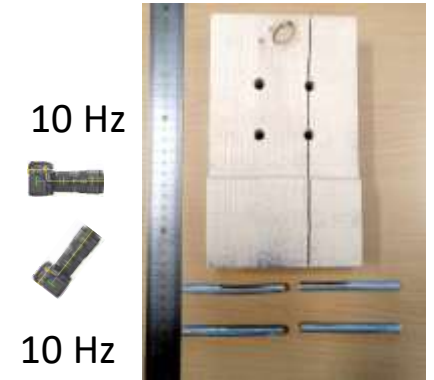
OB4

$w = 10 \%$
 $M = 780 \text{ g}$
 $\rho \sim 435 \text{ kg/m}^3$



OB5

$w = 10 \%$
 $M = 735 \text{ g}$
 $\rho \sim 406 \text{ kg/m}^3$



Résultats

Déformation du bois et des
broches

Perte de raideur et dissipation de
l'énergie



Hystérésis lors des chargements

Variabilité