HYDRO-MECHANICAL BEHAVIOUR OF *AUCOUMEA KLAINEANA* UNDER DRYING PROCESS

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SCIENTIFIC CONTEXT

- The environmental impact of wood in Europe and in equatorial regions as Gabon (Fig. 1)
- In Gabon, various and unknown tropical species (Fig. 2)
- Okume (Aucoumea klaineana) : used in building, veneer, finished products, design of the paper

- Mechanical behaviour during drying plays a decisive role in the development of defects
- Drying process ➔strains and cause cracking responsible to the collapse of structures (Fig. 3)
- Objective : study the hydro-mechanical behaviour of Okume subjected to natural drying

Fig. 1 : Forest in Gabon

Fig. 2 : Okume in Gabon

Fig. 3 : Drying process

DEVICES AND EXPERIMENTAL METHOD

Fig. 4 : Slice

Fig. 5 : Camera

Fig. 6 : Scale

Fig. 7 : Experimental setup

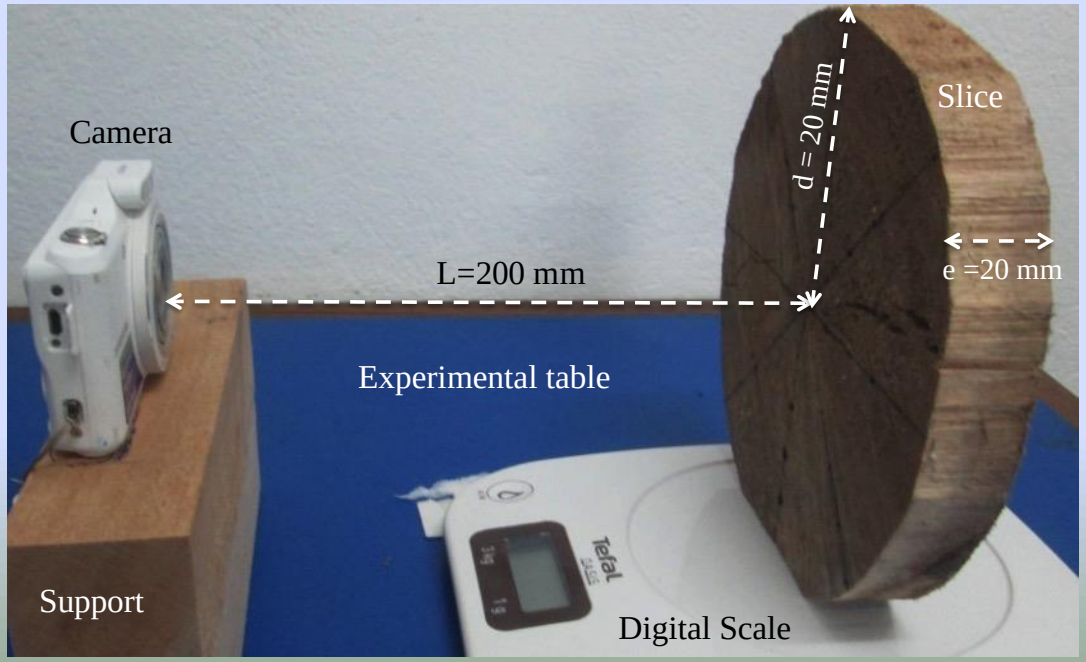

Fig. 8 : Slice before drying

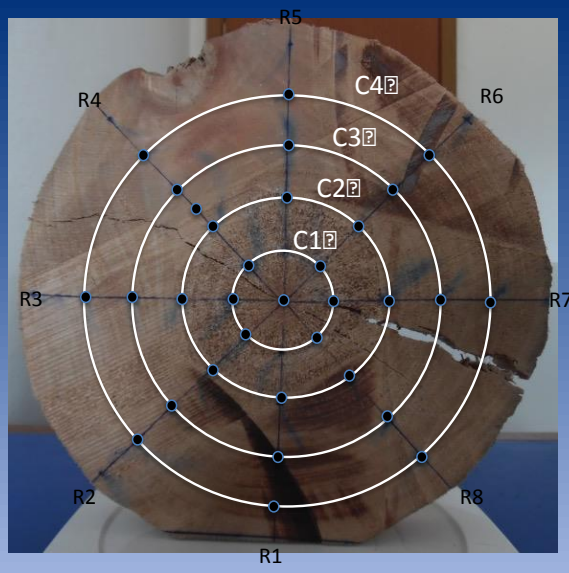

Fig. 9 : Slice after drying

$$E_{!} = 1810 * \left(\frac{!}{!.!"}\right)^{!.!"}$$

$$E_{!} = 1030 * \left(\frac{!}{!.!"}\right)^{!.!"}$$

$$G_{!"} = 366 * \left(\frac{!}{!.!"}\right)^{!.!"}$$

Equations: Guitard, 1987; Palka, 1973

Specie	Aucoumea Klaineana
Diameter	250 mm
Thickness	30 mm

Equations

FOR RESULTS and CONCLUSIONS

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