

## **ENGLISH SUMMARY**

### **COLUMN EQUATIONS OF YLINEN ARE STILL VITAL**

Martti Mikkola

Journal of Structural Mechanics, Vol. 27  
No 1, 1994, pp. 3-13

The paper reviews the column formulae established by Ylinen some fifty years ago and their recent reapplication. Originally Ylinen derived his equation for the buckling of centrally compressed column using a nonlinear stress-strain relationship. Later he extended his study to eccentrically compressed and initially curved columns. Recently Zahn re-examined Ylinen's formula and found that it describes very accurately the interaction of two failure modes of wood columns: crushing and buckling. Therefore it has been adopted for column design by the National Forest Products Association in United States.

### **THE STRENGTH OF THE CONTINUOUS SANDWICH PANELS AT INTERMEDIATE SUPPORTS**

Lassi Martikainen  
Paavo Hassinen

Journal of Structural Mechanics, Vol. 27  
No 1, 1994, pp.14-25

The bending strength at intermediate supports is one of current interests in the design of multispan light weight sandwich panels. The support areas of continuous sandwich panels have been left more or less unattended in the design procedures and their design is often based on experiments. Because of the geometrical nonlinearity there is a strong interaction between the global bending moment and the support reaction, which reduces the bending capacity of the panel on the support. The paper represents an analytical model to estimate the strength of the compressed face at an intermediate support. The model includes the geometrically nonlinear interaction between bending moment and the support reaction and is suitable for the practical design work.