

# **Computermatic Stress Grading Machine**

Following the demonstration at the Forest Products Research Laboratory, Princes Risborough in 1962 of the basic principles on which a machine might be produced which could automatically and continuously assess the bending strength of timber, considerable interest has been centred on the probable value of such a machine to industry. Machine grading is potentially much more accurate and faster than visual grading and could lead to increased efficiency in the structural use of timber. The Forest Products Research Laboratory has recently taken delivery of a Computermatic stress grading machine, the first of its type in Europe. The machine was developed in 1966 by the Division of Wood Technology, Forestry Commission, New South Wales, Australia. Of the three grading machines now manufactured this is the least expensive and it is basically the most suitable for use in this country. Timber is fed through the machine at speeds up to 200 ft. per minute. A load is applied to each piece of timber and the deflections are measured. A computer unit, translates deflections into bending strength ratings. The strength rating or stress grade at every 6 inches along the length of the timber is identified by a coloured dye sprayed on the surface. The machine can classify timber into four stress grades at a single control setting.

It is claimed in Australia that the Computermatic machine can stress grade both planed and sawn timber. The Forest Products Research Laboratory is now carrying out trials to determine the adjustments and modifications which may be needed to make the machine perform satisfactorily especially from the viewpoint of accuracy under conditions obtaining in this country.