

TECHNICAL NOTES

FOREST PRODUCTS LABORATORY

U. S. FOREST SERVICE

MADISON, WISCONSIN

No. 115

CHECKING THE DOYLE AND SCRIBNER LOG SCALES

An opportunity for checking the Doyle and Scribner log scales with the net lumber tally for logs of different diameters was afforded during a mill scale study conducted at Proctor, Arkansas, by the U. S. Forest Products Laboratory. The mill was a single band cutting red and white oak. The red oak logs were plain sawed, except that the last quarter of exceptionally good logs was quarter sawed. The white oak logs were plain or quarter sawed to the best advantage - that is, logs up to 22 and 24 inches were plain sawed and larger logs quarter sawed. Approximately 90 per cent of the lumber was 1-inch stock, 5 per cent 2- and 3-inch stock, and the remainder cross-ties and small timbers.

The net lumber tally is plotted against both the Doyle and Scribner scales in the accompanying chart. As will be seen, the Doyle scale gives an exceptionally large overrun for small logs. The Scribner scale is more accurate than the Doyle scale for small logs but often gives too small results for large logs.

A combined Doyle-Scribner scale using the Doyle scale on logs up to 28 inches and the Scribner scale on logs 28 inches and over would give the largest possible overrun for both large and small logs.

The overrun or underrun will probably never be the same in any two mills, because of variations in thickness of saw kerf, thickness and width of material sawed, percentages of the different sizes, quality of the log with reference to defects, efficiency of labor, and like factors.

