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NEW ZEALAND METEOROLOGICAL SERVICE

TECHNICAL INFORMATION CIRCULAR NO. 122

PREPARATION OF SLIDES AND FILM STRIPS

The following notes based on Circular Memorandum 59/29 are reproduced for information of staff.

TIC 122

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PREPARATION OF SLIDES AND FILM STRIPS

Slides or film strips made from 35 mm film can be very successful in conveying information rapidly and in emphasizing the main points of a lecture. Good slides can hold the attention of the audience.

Too often speakers fail to use slides to advantage by trying to include more detail in a frame than can be taken in at a glance, or by using lettering or symbols that cannot be read from the back of the hall.

If the text cannot be read when the slide is projected onto a small screen, not much is likely to be gained by projecting the same slide onto a larger screen, for the enlargement is offset by a falling off of definition.

A number of tests made by S. H. Saxby, R. H. Scott and M. W. Averis (N.Z. Journal of Science and Technology Vol. 36B : 191-200, November 1954) provide a useful guide for the preparation of legible slides. These authors gave as their main conclusions :

"(1) A 100-inch screen size is suitable for use in a hall at least 100 ft long.

(2) A 50-inch screen size is suitable for a hall up to 60 ft long.

(3) Capital letters should be used in preference to lower case.

(4) Legibility is satisfactory if the height of the capital letters on the original material is one-fortieth the horizontal length of the frame.

(5) The thickness of the stem of the letter should not be less than one-sixth its height.

(6) A high-contrast, fine-grained, slow film (microfilm) is the best for reproducing written material for slides.

(7) Good blackout is necessary for best results.

(8) White letters on a black background are not as satisfactory as black letters on a white background.

(9) The size of the paper on which the original lettering is placed is important only in so far as ease of photography is concerned.

(10) A small amount of written material on a slide is more easily absorbed by an audience than is a large amount."

The screen size referred to is the horizontal dimension of the illuminated area. The vertical dimension will be two-thirds of this.

The most important conclusion to bear in mind in preparing material for slides is probably (4). For legibility the spacing between lines should be about the height of the capitals. A satisfactory slide of tabular material should therefore have no more than twelve lines, each with about 28-30 typical letter spaces.

The Kodak Company (Kodak Audio-Visual Data Book: Photographic Production of Slides and Film Strips, 2 Ed. 1960) recommends that the minimum heights of lettering (expressed as fraction of height of projected area) should conform with the values in the following table :

Ratio of distance of farthest spectator to width of screen	Ratio of height of character to height of projected area
4 : 1	1 : 75
6 : 1	1 : 50
8 : 1	1 : 35
10 : 1	1 : 30
12 : 1	1 : 25

The sizes of lettering recommended by the Kodak Company are greater than those found by Saxby, Scott and Averis to be just acceptable, and would lead to greater legibility. Any symbols used, and the thicknesses of lines in drawings, should be scaled to the size and thickness of lettering.

To summarize: slides, to be effective, must be simple, uncluttered and boldly drawn, and have lettering and symbols large enough to be read without difficulty by the most distant members of the audience.
