

## We report 3 on outstanding offset work

300-line screen in offset reproduction

The reproduction of halftone pictures by an ink film of constant thickness – as in offset printing – involves the break-up of the image into numerous small different-size screen dots. The finer and the more numerous the screen dots, the better will be the quality of the reproduction. The ideal is still the unscreened reproduction, but the search for this is handicapped by technical limitations and practical experience. The surface of the paper, the type and smoothness of the printing plate and finally reproduction work itself determine the screen of a reproduction.

On coated papers screen with 150 or 200 lines to the inch are today used to a large part. With a view to quality improvements, 300-line screens have also been used in offset printing. Good results have been obtained with such fine rulings on single and two-colour machines. The 300-line screen with its 90,000 screen dots to the square inch may today be considered the acme of offset perfection as regards fine break-up of the image and image transfer. With the use of such fine screens it is now possible to ensure high fidelity reproduction by offset of colour photographs and other copy having finest detail, and to guarantee highest quality. Much is being talked about this fine screen ruling, and comment seen in the trade press is for or against it.

The cover illustrations of *Roland News* 5 and 12 showed the use of these fine screen rulings. The importance of this quality progress obviously had to be demonstrated on the four-colour machine. To help the development and progress of offset technique we wanted to find out how plates with such a very fine screen of 300 lines to the inch behaved in four-colour wet-on-wet work. The result of our printing experiments was highly satisfactory. We can now state emphatically that offset printing with 300-line screen is well possible on the four-colour machine assuming suitable preparation and general conditions. The printed result of our supplement is ample proof of this fact. Now that 300-line screen reproductions can be printed successfully on the four-colour machine, four-colour offset printing is really getting into its stride as a proof of offset efficiency. This progress is also enlarging the application of offset printing.

The printing of multi-colour work using these fine screens demands high quality offset machines, which ensure sharp dot printing and precision register. The printing

