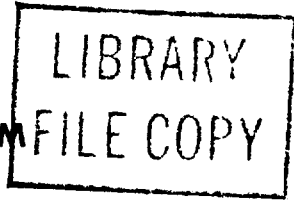


DOCUMENTS ON 16mm MICROFILM  
INSPECTION PROCEDURES — DUPLICATE MICROFILM



1. GENERAL

- 1.01 This section covers the inspection procedures for 16mm duplicate microfilm.
- 1.02 This section is reissued primarily to revise the resolution test chart in 4.01. Since the reissue covers a general revision, arrows ordinarily used to indicate changes have been omitted.
- 1.03 Use care in handling microfilm to avoid scratching or otherwise damaging the film. The use of clean, soft gloves in handling microfilm is recommended. All surfaces on which the microfilm is placed should be wiped clean with a lint-free cloth.

2. EQUIPMENT AND MATERIALS

- 2.01 The following equipment and materials are required for inspecting duplicate microfilm. For magnifiers and microscopes considered suitable for Bell System use, see Section 006-220-100.

*General*

Soft, White Gloves

Lint-Free, Soft Cloths

*General Quality*

Light Box and Rewind Unit

Magnifier

*Resolution Test*

Microscope

3. GENERAL QUALITY

- 3.01 *Requirement:* All processed duplicate microfilm shall be free of scratches, foreign material, stains, or defects which make information illegible.

- 3.02 *Method of Test:* Inspect the duplicate microfilm for faulty processing. This can be recognized by such defects as stained or discolored areas or excessive curl of reel film edges. Check the duplicate microfilm on a light box to determine that the film is free of scratches or foreign material which make information illegible. Examine doubtful areas of the film with the magnifier.

4. RESOLUTION

- 4.01 *General:* Resolution is a measure of the sharpness of an image, and is expressed in the number of lines per millimeter which can be distinguished. Resolution of duplicate microfilm is measured by examining a duplicate copy of a microfilm test chart (see Fig. 1) under a microscope to determine which of the 21 patterns on the test chart is the smallest pattern in which lines can be distinguished both horizontally and vertically. The number adjacent to this pattern multiplied by the reduction ratio at which it was photographed indicates the resolution in number of lines per millimeter. Test target images for checking the resolution of duplicate microfilm are the copies of the test target images on the duplicate microfilm.

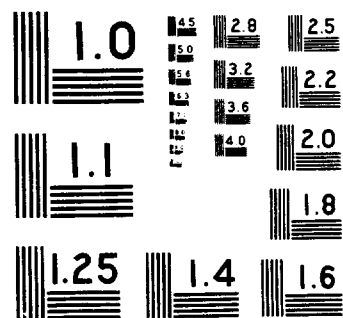


Fig. 1 — Resolution Test Chart

**Requirement**

**4.02 Resolution:** The processed duplicate microfilm shall have sufficient resolution to permit resolving the following test chart pattern.

TYPE OF CAMERA (See Note 2)	TEST CHART PATTERN (See Note 1)
Planetary	4.0
Rotary	2.5

**Note 1:** This will insure a resolution of minimum 57.5 lines per millimeter on rotary cameras and minimum 92 lines per millimeter on planetary cameras at 23X reduction.

**Note 2:** The type of camera which originated the silver film can be identified by the configuration of the test target image. A target containing five resolution tests charts, one in each corner and one in the center, is indicative of microfilm produced on a planetary camera. A target containing three diagonally arranged resolution test charts indicates microfilm produced on a rotary camera.

**4.03 Method of Test:** Check the resolution of each of the resolution test charts, which appear on the duplicate microfilm test target images, with a microscope of approximately 60X magnification. Place a test frame on the stage of the microscope and position it so that one of the resolution test charts is centered in the stage. Adjust the microscope to obtain a clear, sharp image and determine whether lines can be distinguished both horizontally and vertically in the required test chart pattern. This test should be repeated on each of the other resolution test charts in the test target image. The resolution of the test charts must meet requirement 4.02. For duplicate reel microfilm, the test should be made on each of the test target images on the reel.

**5. IMAGE CENTERING**

**5.01 Requirement:** Each document image shall appear on film so that the entire image of the document is within the 16mm width of the film.

**5.02 Method of Test:** Place the reel of film on a reader or light box and scan the images at a reasonably low speed. No portion of any image shall run off the top or bottom edges of the film.