TECHNICAL REPORT

ISO/TR 12036

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Micrographics — Expungement, deletion, correction or amendment of records on microforms

Micrographie — Élimination, effacement, correction ou amendement d'enregistrements sur microformes

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 3.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

In exceptional circumstances, when a technical committee has collected data of a different kind from that which is normally published as an International Standard ("state of the art", for example), it may decide by a simple majority vote of its participating members to publish a Technical Report. A Technical Report is entirely informative in nature and does not have to be reviewed until the data it provides are considered to be no longer valid or useful.

Attention is drawn to the possibility that some of the elements of this Technical Report may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO/TR 12036 was prepared by Technical Committee ISO/TC 171, *Document imaging applications*, Subcommittee SC 3, *General issues*.

Introduction

Expungement legally ordered on selective records by courts of law may jeopardize the admissibility of “expunged” microfilm as evidence in these courts of law. Microfilm is inherently a medium not easily subject to correction. Therefore, it is necessary to provide guidelines for expunging microfilmed records to ensure that uniform procedures can be followed which minimize the possibility of having microfilm rejected in the courts. This document is intended to provide guidelines for the best method, to date, of removing information from microforms.

A court-ordered expungement may be rescinded by a higher legal court or reconsidered by the originating court. If the microfilmed record has been destroyed or defaced in compliance with the first order before the rescinding order is received by the records custodian, the complete original record is lost forever. This is particularly true if the normal course of daily business allows destruction of the original document. This loss may be catastrophic to courts of law if further litigation becomes mandatory and the original document can no longer be produced in any form. In view of this possible pitfall, court administrators should be prepared to organize their files to provide for such contingencies. The prerogatives of legal courts in establishing or organizing operating procedures are unaffected by this Technical Report. Therefore, this document covers only a recommended means of removing a record or portion of a record in specific compliance with an ad hoc expungement order.

Micrographics — Expungement, deletion, correction or amendment of records on microforms

1 Scope

This Technical Report applies to the removal and destruction of images from microforms when document expungement is ordered. It also applies to the revision of image content when an order requires the deletion, correction or amendment of specific information. It establishes proper procedures for image removal or revision and for documenting these actions to ensure file integrity.

These guidelines cover techniques for removing information from microforms. If followed, they should enable the user to adequately meet an expungement request.

2 Reference

ISO 6196-1:1993, *Micrographics — Vocabulary — Part 1: General terms.*

3 Terms and definitions

For the purposes of this Technical Report, the terms and definitions given in ISO 6196-1 and the following apply.

3.1
deletion
obliteration of specific information contained in a microfilmed document

NOTE This procedure does not permit the removal and destruction of an image or images without replacement, unless it contains only the information to be deleted; nor does it permit the obliteration of information other than that specified in the deletion order. All expungement work should be done in a way that avoids damage to the rest of the film.

3.2
destruction
complete elimination of a microform or section of a microfilm

NOTE This requires an action such as incineration or shredding.

3.3
expungement
process of removing a document from a system and leaving no evidence of the document ever having appeared on the system

3.4
removal
actual elimination of an image or images from a microform

4 File integrity

It is essential that file integrity be maintained to ensure the accuracy, completeness, and legal acceptance of a microform which has been altered. It is also essential that the documentation authorizing any alteration should be kept for the life of the relevant microform.

The procedures for expungement require that images in a microform be removed and destroyed or be obliterated, leaving no evidence of the original document Procedures for deletion, correction, or amendment require the substitution of revised images for original images in the microform. Care should be taken, in the replacement of images, to match the density of the overall film. The original images should be destroyed or obliterated.

Documentation for an altered microform should consist of the order mandating the change (e.g. expungement) and the completed notice (see annex A). The documentation is inserted in place of the expunged document or precedes the replacement image or images containing deletions, corrections, or amendments.

In those instances when the order contains information that could identify the expunged document or could reveal the original information which is to be deleted, corrected, or amended, the order is not microfilmed or placed in the altered microform. Only the notice is inserted. The notice will include appropriate reference to the missing order. In some instances, either the microform or space limitations will not permit the insertion of the microfilmed order and notice. Appropriate instructions for resolving this problem are described according to the specific type of microform.

5 Expungement procedures

5.1 General

The procedures described in 5.2 to 5.8 should be followed when expungement of a document image or images is ordered.

The changes ordered to be made should be made to the master microform. Any images which are to be inserted should be produced to at least the same standards as used for the original microform.

When the following procedures are being carried out, normal precautions for handling master microforms, such as the provision of a clean, clear work area and the wearing of clean white cotton gloves, should be followed.

NOTE Where copies exist, these should be replaced by new copies from the altered master and the replaced copies should be destroyed. Any replacement of images should include additional images before and after the replaced defective image(s) for splicing purposes. Replacement images should be spliced in the original film according to the approved procedures (i.e. at the beginning of the roll, at the end of the roll or in place of the defective image).

5.2 Silver gelatin 16 mm and 35 mm roll film

Some expungement methods are not considered acceptable (see Table 1).

5.2.1 Manually indexed roll film

Remove and destroy the section of film containing the image or images covered by the expungement order. In place of the removed section, splice in a microfilm image of a completed notice and the expungement order if it does not contain information that could identify the expunged document or reveal its content. All images spliced into the original camera negative should be filmed at the same reduction or as close to the original camera negative reduction ratio as possible.

Table 1 — Unreliable methods of expungement

Method	Reason for rejection
Punching a hole or holes through document images to eliminate information	Weakens film, prevents accurate duplication where tension on film may cause distortion or breakage during the duplication process. May not completely eliminate all aspects of the file.
Using opaque or blocking out the image with ink-type pen	Opaque can be removed, an ink pen cannot completely block out the information, and both may cause long-term damage to the film.
Chemical means such as potassium dichromate (bleach) used on emulsion	Difficult and complicated process that requires proper equipment and facilities. No chemicals of any kind should be used on long-term film to delete images from the film. Chemical treatments may cause deterioration during long-term storage. Problems of toxicity or environmental pollution preclude the use of many chemicals.

5.2.2 Blipped or coded roll film

Remove and destroy the section of film containing the document image or images covered by the expungement order. In place of the removed section, splice in a microfilm image of a completed notice and the expungement order if it does not contain information that could identify the expunged document or reveal its content.

If the blips or codes are used in the retrieval system, it is important that the replacement section contain the same number of blips or other appropriate codes as the original section removed so that the electronic image count for retrieval is maintained. It is also essential that the coded film be made and coded by the same method as used for the removed original microfilm. Ink markings should not be used on archival microfilm for blip or code corrections.

NOTE It should be noted that the reader can recognize an ultra sonic splice as a blip. Tests should be conducted to determine if the splice has altered the blip count.

5.2.3 Duo or duplex roll film

Remove the image or images ordered expunged by abrasion of the emulsion as described in 5.4. Care should be taken not to abrade the blipped or coded area since this may cause misreads by the reader's retrieval unit. Splice a microfilm image of the completed notice at the beginning of the reel, together with an image of the expungement order if it does not contain information that could identify the expunged document or reveal its content.

5.2.4 Long term roll film splices

Use a thermal butt weld or sonic splice for a polyester film base and a thermal butt weld for an acetate film base. A tape splice can be used, but there are no standards that allow its use on film stored for long term purposes.

When multiple expungements are constantly performed on the same or multiple reels of film, note which reels have been expunged during the year and duplicate those containing more than four splices at the end of the year or when activity in the records has decreased or stopped.

5.3 Microfilm jackets

When more than one document image is to be expunged, remove the images from the appropriate channel or channels in the jacket and destroy them. In place of the removed images, insert a microfilm image of a completed notice and the expungement order if it does not contain information which could identify the expunged document or reveal its content.

If the expungement order involves only a single image, remove it from the appropriate channel in the jacket and destroy it. In place of the removed image, insert a microfilm image of a completed notice and the expungement order if it does not contain information which could identify the expunged document or reveal its content. If there is not sufficient space to include both the notice and order, then insert a target indicating that documentation concerning the expungement is in the following jacket. Create a new jacket containing the notice and order. Ensure that the new jacket is numbered or identified to maintain the proper file sequence and to indicate the presence of the new jacket.

If the expungement calls for one or more completely full jackets to be expunged, remove and destroy each full jacket or jackets. Replace each with a new jacket containing the notice and the expungement order and maintain the proper file sequence.

5.4 Microfiche

Microfiche are created by direct imaging on sheet film or exposed on roll film stock and then cut. Either a step and repeat camera or a COM may be used for either method.

For direct recordings on silver negative microfiche, remove the image or images to be expunged by abrasion of the image emulsion. This is accomplished with an instrument that has been slightly rounded on the corners and polished so there are no rough edges or metal burrs to damage the film base (see Figure 1). Use a magnifier with at least a 6:1 magnification for the removal process. Take care that the film base is not damaged when removing the emulsion or that the edges of the magnifier do not scratch the film during the expungement process. Identify the area to be expunged. This area should then be moistened with a small amount of distilled water. It will be necessary to extend moistening beyond the edges of the image because the water will evaporate quickly due to the heat of the light box. Only enough water should be used to keep the expunged area damp. The instrument is then used to remove the softened emulsion from the film by pushing toward the centre of the identified image. Make certain the film is completely dry before rewinding or placing the emulsion in contact with any other object.

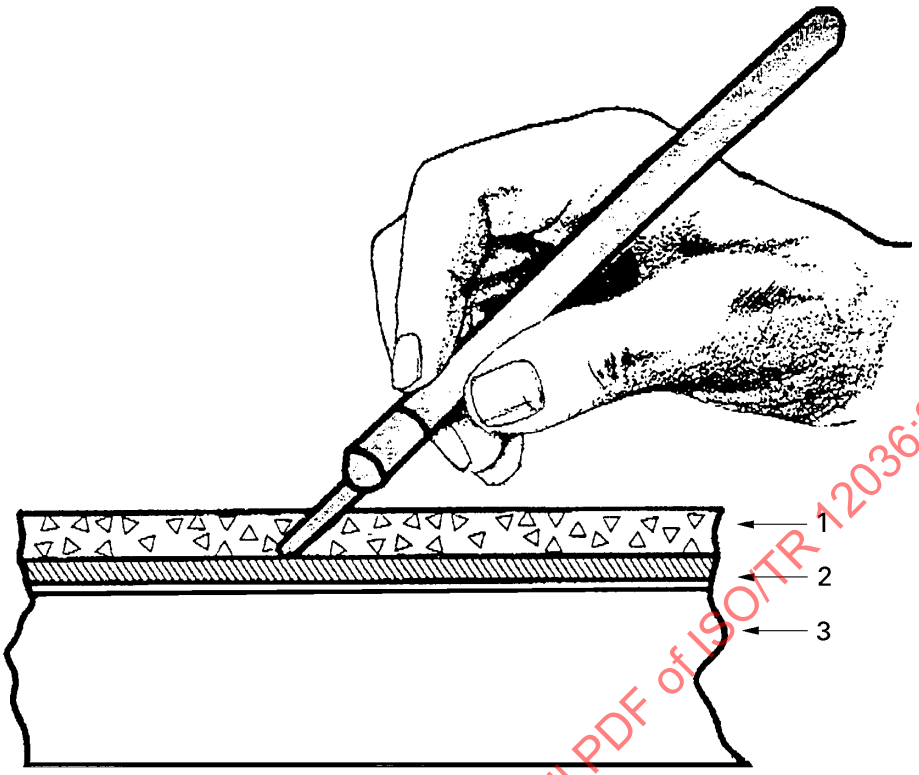
NOTE Different brands of film may react differently to the moistening procedure, so it is recommended that the procedure is practised on a piece of leader from the same brand of film before working with the camera master negative. It may be helpful to practice on an imaged sample piece of film to see how precise you can become before attempting to expunge an official record. A razor or knife can be used in this process, but take care that the base of the film is not damaged.

When the image has been removed, make a duplicate silver negative copy of the altered original camera negative for long term retention and store them together. The notice, the expungement order (if it contains no identifying information), and the camera operator's certificate are to be microfilmed on a separate microfiche and filed with the original altered camera negative and duplicate copy.

5.5 Computer-output on 16 mm and 35 mm roll film and on 105 mm cut microfiche

Use the procedures described in 5.2.1 or 5.2.2 for removing images from silver gelatin 16 mm and 35 mm roll film. A completed notice, the expungement order (if it contains no identifying information), and the camera operator's certificate are to be filmed using source document microfilm and spliced in place of the removed section of film.

Use the procedures described in 5.4 for 105 mm cut microfiche. If the image cannot be easily removed, make a paper printout of all documents on the microfiche. Refilm these documents together with the altered printout and the authorising documentation. Load this new master microfilm into a jacket, and file as a revised microfiche in place of the original one.



Key

1 Emulsion (dull)
2 Subbing layer
3 Base (shiny)

Figure 1 — Abrasion technique

5.6 Photoplastic film

The ability to remove images from photoplastic film is inherent in thermal processing technology. Replacement images can be recorded in the area where images have been removed for expungement. The following procedure describes the permanent removal of images from original recording and the expungement procedure when using photoplastic films. The camera can be used for both the original recording and the expungement procedure. The expungement function can only be activated through the use of a security key. The film should be placed into the unit and the image to be expunged located on the monitor screen. After verification, the security key should be turned and the DELETE key pressed to erase the image by the system's thermal processing. Once the image has been removed, a copy of the expungement order, the operator's certificate, and any other appropriate information can be recorded in the expunged frame area of the film. If there is insufficient space to hold this information, create an additional microfiche.

5.7 Transparent electrophotography (TEP)

Destroy the copy and replace it with a copy from the altered (expunged) original master. If the master is not available for revision remove the image from the copy, using a specially designed tool for the removal of TEP images available from the TEP system's manufacturer. This tool is used to permanently eliminate the required image or images following the manufacturer's instructions. Consult the film manufacturer or supplier for more information.

Document the expungement by creating a new master containing a completed notice, expungement order (if it does not include information which could identify the expunged document), and camera operator's certificate. File this master with the altered original master; place a copy of this new master with the copy of the altered microform. If space permits, the notice and other targets can be filmed on the original master.

5.8 Diazo and vesicular film

For microfiche, replace any current microfiche copies with a copy of the altered camera negative. Destroy the replaced copy. If the camera negative is not available, remove the images to be expunged by a dry abrasion process similar to that described in 5.4. File a copy of the microfilmed notice, order, and camera operator's certificate with the substitute or altered microfiche. The TEP tool mentioned in 5.7 may also be used with vesicular film in both microfiche and roll formats.

For roll film, replace any current copy with a copy of the altered camera negative. Destroy the replaced copy. If the original is not available, splice out the images of the document ordered expunged and insert a copy of the microfilmed notice, order, and camera operator's certificate.

5.9 Other films

Consult the film manufacturer or supplier for the appropriate method to remove (expunge) images.

6 Deletion, correction, and amendment procedures

6.1 Silver gelatin 16 mm and 35 mm roll film

When the following procedures are being carried out, normal precautions for handling master microforms, such as the provision of a clean, clear work area and the wearing of clean white cotton gloves, should be followed.

6.1.1 Manually indexed roll film

Reproduce a hard copy of the document image or images to be revised from the original microfilm of the document. Make the ordered changes on the paper copy. Microfilm the revised copy and the completed notice. Remove the original image or images from the roll and destroy. Splice in the revised image or images and the notice in place of the removed film. Include the revision order only if it contains no identifying information. All images spliced into the original camera negative should be filmed at the same reduction or as close to the original camera negative reduction ratio as possible.

6.1.2 Blipped or coded roll film

Follow the procedure for the revision of manually indexed roll film in 6.1.1. However, it is essential that replacement images are appropriately blipped or coded so that the electronic image count for retrieval is maintained. It is also essential that code film replacement be produced and coded by the same method (equipment) as the removed original microfilm. Do not use ink markings on archival microfilm for blipping or coding.

6.1.3 Duo or duplex roll film

Remove the image or images ordered revised for the roll by abrasion of the emulsion as described in 5.4. Care should be taken not to abrade the blipped or coded area since this can cause misreads by the reader's retrieval unit. Splice the revised document image or images and the completed notice at the beginning of the reel. Include the revision order only if it contains no identifying information.

6.2 Microfilm jackets

From the original microfilm, reproduce a hard copy of the document image or images to be revised. Make the ordered change or changes on the paper copy. Microfilm the revised copy and the completed notice. Include the revision order only if it contains no identifying information. Remove the original image or images ordered revised from the appropriate film channels and destroy them. Insert the microfilm of the revised document image or images, the completed notice, and the order (if applicable) in place of the removed original image or images.

There will be instances when space will not permit the insertion of the revised image or images with the notice and order. In such cases, insert a completed target indicating that the microfilm for the revised image or images are in the following jacket. Create a new jacket containing the revised image or images, notice, and order. Make certain