

USE OF THE HOT STAMPING PRESS
Raising Standards Through Awareness
Presented by Bill Minter & Kevin Hayes
Guild of Book Workers Standards of Excellence
Boston December 3 & 4, 1993

OUTLINE

Introduction & dedication to Bill Anthony.

Illustrated history of hot stamping (also known as blocking); actual examples from ca. 1900.

Hot stamping machines: Styles, manufacturers & dealers (hand-out for new and used); maintenance.

BASIC 8 components of successful hot foil stamping:

PREPARATION

- 1a) TYPE (hand-out of suppliers)
Lead - foundry, Monotype, Ludlow, Linotype - limited number of impressions.
Service Type - zinc; durable (years of use); diagram showing height of counter.
Brass.
Steel.
Comparative costs; leads and slugs of brass or aluminum, cleaning procedures.
- 1b) DIES
Hand engraved: photomechanical etching (photoengraving).
Example of process.
Comparison of steel, brass, copper, zinc, magnesium - cost, durability.
Mounting: mounted by engraver on lead, aluminum or wood; mounted by stamper with fish glue or die bonding tape. Attaching block directly to dovetail. Removing die and mounting material from block.
- 2) FOIL
Diagram (hand-out).
Various foils available (hand-out of suppliers).
Imitation gold on leather.
- 3) MAKEREADY
Use of Force - either binder board or plexiglas (Lexan).
Examine reverse of test stamping for uniform impression.

- 4) **BLIND IMPRESSION.**
Extremely important in hand stamping.
Need a good clean, smooth, uniform impression.
Alignment of material (use of Force).

APPLICATION

- 5) **TEMPERATURE** of die or type face
Check with pyrometer or temperature indicator label.
- 6) **PRESSURE:** sufficient to transfer foil; too much creates too deep an impression and damages material to be stamped
- 7) **DWELL TIME:** The precise amount of time required to transfer the foil.
- 8) **CLEANUP:** Ideally, there should be no need for cleanup. However, in hand stamping it may be necessary. Use cloth, eraser, copper smoothall, orange stick or toothpick, Scotch rubber.

MISTAKES OR PROBLEMS:

Remove foil with isopropyl alcohol; blank-in; methylcellulose sizing, retouch if needed.

EXAMPLES OF VARIOUS STAMPING PROCEDURES:

Blind stamping using moisture.
Oversize items and labels stamped before attaching to cover.
Preparation of artwork for dies; enlarge, retouch, reduce.
Use of Glaire or Fixor; clear foil; ink on leather; three-dimensional images.

DEMONSTRATION

Force; makeready; carbon paper; alignment of material.

Franklin 115: Gold foil on leather after blind impression while damp.

Kensol 36: Blind impression on leather with leather onlay; onlay faced with tissue; carbon impression; cut out and apply; blind stamp final.
Stamp on dovetail with table.

OTHER TIPS, QUESTIONS, DISCUSSION

USE OF THE HOT STAMPING PRESS

BASIC 8 STEPS FOR SUCCESSFUL HOT STAMPING

PREPARATION STEPS

The following steps need to be in place before stamping is done.

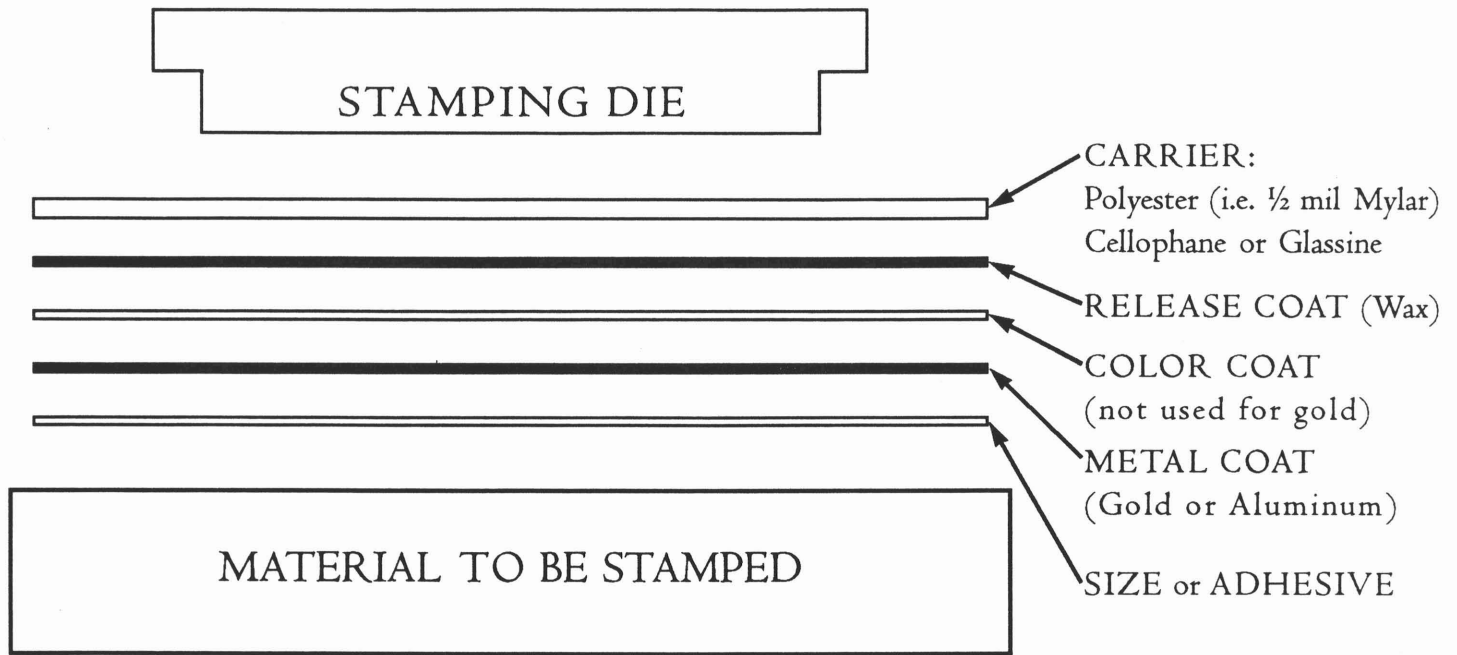
- 1) **BLIND IMPRESSION**
Stamping on a hand press requires the ever-important blind impression. Properly done, it creates a smooth surface to which the foil can be applied. To obtain a good blind impression, you'll need to develop the proper pressure. Start light and increase pressure as needed.
- 2) **HOT STAMPING FOIL**
The proper foil for the material being stamped, as recommended by the foil manufacturer.
- 3) **DIE or TYPE**
Good quality, deeply cut in a hard metal; appropriate level of detail (fineness of lines) for the material being stamped.
- 4) **MAKEREADY**
A uniform and solid surface for the material being stamped.

APPLICATION STEPS

The following steps can be variable, and are controlled by the stamper at the time the foil is applied to the material.

- 5) **TEMPERATURE** of the face of the die or type
The temperature required to release the foil material from its carrier and adhere it to the material being stamped; usually 225 to 275 degrees Fahrenheit.
- 6) **DWELL TIME**
The amount of time the die or type is in contact with the foil on the material.
- 7) **PRESSURE**
Slightly more than is needed for the blind impression.
- 8) **CLEANUP**
Ideally, there should be no need for cleanup. However, in hand stamping it may be necessary. Use cloth, eraser, copper smoothall, orange stick or toothpick, Scotch rubber.

HOT STAMPING FOIL



CARRIER: Usually polyester film - 1/2 mil mylar is used for most foils. Other materials are cellophane and glassine. Polyester is best because it is thin, smooth, puncture and heat resistant; also, heat is transferred through it quickly.

RELEASE COAT: Usually wax or a wax/resin mixture.

COLOR COAT: *Not used in gold foil.* Transparent dye or pigment, used with a metal coat.

METAL COAT: Gold, but often aluminum for reflecting color. Aluminum is vaporized by heating to 1800 degrees Fahrenheit in a vacuum chamber. Aluminum condenses on foil to form thin coat. Think of steam or your breath condensing on cool glass surface.

ADHESIVE COAT: Bonds metal and color to material being stamped. The amount and type of adhesive will vary according to the material being stamped.

LIST OF SUPPLIERS

STAMPING PRESSES

American Graphic Arts Inc.
150 Broadway
Elizabeth NJ 07206
201/351-6906
Used equipment

Craftsmen Machinery Co.
1073 Main St.
Millis MA 02051
508/376-2001
Used equipment

Franklin Manufacturing Corp.
692 Pleasant St.
Norwood MA 02062
617/769-5800

Gane Brothers & Lane
1400 Greenleaf Ave.
Elk Grove Village IL 60007
708/593-3360

James H. Jones Co.
615 N. Benton St.
Palatine IL 60067
708/358-2090
Used equipment

Kensol/Olsenmark Inc.
40 Melville Park Rd.
Melville NY 11747
516/694-7773

Kwikprint Manufacturing Co. Inc
4868 Victor St.
Jacksonville FL 32207
904/737-3755

P B & E Engineering Ltd.
717 Banbury Ave.
Slough, Berkshire SL1 4LH
ENGLAND
Tel. Slough 36536

Ernest Schaefer Inc.
731 Lehigh Ave.
Union NJ 07083
201/964-1280

STAMPING FOIL

Astor Universal
14400 W. 96th Terrace
Lenexa KS 66215
913/888-6850

Ralph W. Grauert, Inc.
100 Kings Highway
Canton CT 06019
203/693-8038

Kensol/Foilmark
see Kensol Olsenmark

Kurz-Hastings Inc.
Dutton Rd.
Philadelphia PA 19154-3284
215/632-2300

M. Swift & Sons Inc.
Ten Love Lane
Hartford CT 06101
203/522-1181

Also, retailers: Bookmakers,
Bookbinder's Warehouse, Johnson
Bookbinding Supply (see GBW
supplier directory)

TYPE

Fine Cut International
Marlboro Rd.
Churchill Estate
Lancing, W. Sussex BN15 8UF
ENGLAND
(44) 0-903-75088

Franklin Manufacturing

Haas Typefoundry Ltd
4142 Munchenstein Switzerland

Kensol Olsenmark

Kwik Print

Ernest Schaefer Inc.

PHOTOENGRAVING

Local yellow pages, or ask your local
printer.

Kensol Olsenmark

Ernest Schaefer Inc.

Royal Engraving Co.
LaCrosse WI
608/784-2555

Quality Graphics
517 S. Jefferson St.
Chicago IL 60607
312/461-9055

OTHER

McMaster-Carr Supply Company
P.O. Box 4355
Chicago IL 60680
708/833-0300

Brass and aluminum; temperature
indicating labels; plastic egg-crate
material for type drawers.