Litho NOTES

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These notes are brought to you from LICS Robert Carr, USN,the LI exam writer stationed at the Naval Education and Training Program Management Support Activity (NETPMSA) in Pensacola, FL. It is designed to inform the lithographer on rating related and technical information within the field. Litho Notes will be published bimonthly.

NETPMSA

NETPMSA is located aboard Saufley Field in an atmosphere not unlike a small college campus. Over 1000 civilians and 250 military personnel combine efforts to support the Navy's numerous education and training programs. At sometime in your career, you will come into contact with a product or program administered by NETPMSA. The Navy Advancement Center develops and produces advancement examinations, training manuals and correspondence courses.

Instructional Development and Education Programs Support personnel have an important role in the teaching/learning process and they are developing some exciting new techniques and instructional technologies for Navy training programs from the schoolhouse to the fleet.

ADAVANCEMENT HANDBOOK

Advancement Handbook for Petty Officers, NAVEDTRA 71510, effective 1 January 1990 is on the street. See your ESO for your copy. It is your best tool in preparing for advancement.

OCCSTDS

LI3 OCCSTDS - the following sections contain errors. Make the following changes:

32 SECURITY, pg C-3

32272 SAFEGUARD CLASSIFIED MATERIAL -

Change: LI, NAVEDTRA 10451 -- Chap 17 vice Chap 14

69 TECHNICAL ADMINISTRATION, pg C-4

69016 COMPLETE MAINTENANCE DATA SYSTEM (MDS) FORMS -

Change: LI, NAVEDTRA 10451 -- Chap 17 vice Chap 14

LI ENLISTED COMMUNITY MANAGER

Chief of Naval Operations
Code OP132C6
LCDR J.V. Drian, SC, USN
Washington, DC 20376-5000

FACT OR MYTH

In the spring of 1987, Navy Occupational Data Analysis Center (NODAC), administered a occupational task inventory survey. The overall conclusion was that the rating remain a discrete rating and that the feasibility of merging the LI and DM ratings be restudied in 3 to 5 years. The review also concluded that the LI-3601 NEC (Reproduction Equipment Repairman) be reviewed for possible cancellation. BUT, it was determined that the NEC had not been in place long enough nor enough personnel trained to satisfy billet requirements. Other findings include:

*Not occupationally feasible to merge with the JO or PH ratings *Not occupationally feasible for the YN rating to assume LI operator functions with specific skills identified by an NEC and repair functions retained with this NEC or transferred to a technical repair rating

DID YOU KNOW?

Per SECNAVINST 5600.20, Jan 1984, DON Graphic Design Standards, the following are INCORRECT applications of identifiers:

*Never redraw or reset logotypes
*Never use other than first generation art to photographically reproduce the identifiers
*Never rotate the axis of the seal or emblem
*Never reproduce the identifiers in a tint or screen of any color

TECHNICAL LIBRARY

Does your shop have a technical library? If not, I suggest that you start one. First off you should obtain a copy of all the references listed in the Advancement Handbook for Petty Officers, NAVEDTRA 71510, dtd 1 Jan 90. Next you should obtain all notices and instructions that pertain to printing (5600 series). These references will help you in studing for advancement and keep you abreast of the rules and regulations that should be followed in your shop. Remember when dealing with a customer about rules and regulations of printing, common sense should prevail and if in doubt get a clarifaction from your legal officer or from your local NPPS office.

HALFTONE EVALUATION

Three main areas must be considered in evaluating a halftone negative. These are the highlight, the middletone, and the shadow areas.

The highlights are the darkest part of the negative and contain small, clear openings in an otherwise solid area. The highlights on the negative should be approximately 90 percent dots in order to produce 10 percent dots on the printed sheet. The exact size that the highlight dot must attain cannot be specified. It will vary with individual shop conditions and with specific paper stocks. What is wanted is the smallest dot that will be solid enough to be carried through platemaking and printing.

The halftone dots in the range from 30 to 70 percent comprise the middletones of the negative. This is the area where the small black dots are increasing in size until they connect to form the 50 percent dots.

At this point the clear, open areas are equal in size to the black dots and form a checkerboard pattern (the 50 percent area is less obvious when an elliptical dot screen has been used). Between 50 and 70 percent, the open areas decrease in size as the connected black dots increase in size.

The reproduction of flesh tone (hands and faces) often falls in the middletone range. This tends to focus the viewer's attention on the middletones. It is important that the dots here change smoothly and gradually from one dot size to another. In the middletones, minor changes in dot size cause conspicuous changes in the appearance of the printed reproduction. This change is more conspicuous than equivalent variations in the highlight or shadow areas. Tone reproduction in the middletones is critical, particularly so in the 50 percent dot area, where the dots are just joining. Sometimes the continuous tone copy will have a tone in the 50 percent range, blending subtly into another tone. Here it is likely that the four corners of each 50 percent dot will join all along the line of blend, causing a sudden jump in density instead of a subtle transition. It was this problem which brought about the development of the elliptical dot screen. A 50 percent elliptical dot joins only two corners instead of four, thus reducing the harshness of the break in tonal value. An elliptical dot screen is recommended for use with copy which has subtle blends in the middletones.

The area of least density in the halftone negataive is the shadow area. Shadow dots range from tiny, pinpoint black dots to a dot value of about 30 percent (70 to 99 percent in the reproduction image). As in the case of the highlight dot, it is impossible to specify the exact size that the shadow dot should attain. That is dependent on the individual printing conditions and the paper stock. Generally, the blackest shadows of the reproduction where no detail is necessary, may be allowed to print as solids. Areas that are slightly less dense, when detail is desired, should have the smallest dot that can be held open on the printed sheet. The size of this open dot on the printed sheet determines the size of the shadow dot needed on the halftone negative.

To determine the just printable dot, make a series of test halftone negatives of several dark steps of a gray scale. Prepare a printing plate of these steps and proof it on both coated and uncoated paper. The proof will show the smallest dot which can be held under your printing conditions.

TROUBLESHOOTING 1330/1360 DUPES

Adjusting paper finger (stop finger). Make the adjustment when the upper and lower feed rollers just make contact and the paper finger hold down assembly "clicks" into postion. DO NOT OVERRIDE THIS POSITION. Sight and adjust using the number two stop finger. This finger should be slightly below the surface of the paper shelf. IF STOP FINGERS ARE SET TOO HIGH, THE "CLICK" WILL NOT BE HEARD.

If the number two finger is too high, turn the adjustment screw clockwise to lower the fingers.

If the number two finger appears to be properly positioned, rotate the hand wheel one quarter turn in the normal direction of travel, while observing the number two finger. If the number two finger drops slightly, no adjustment is required at this time. If the number two finger drops an appreciable amount, turn the adjustment screw counter clockwise to raise the fingers. If adjustment was required, rotate handwheel in the normal direction of travel, one complete revolution and attain the "click" contact position. RECHECK THE STOP FINGER POSITION. This is a basic position only. Some stop fingers may be higher than the number two, refinement will be made later if lead edge damage occurs. CLOCKWISE LOWERS STOP FINGERS.

Stop finger damage occurs on the lead edge of paper in line with stop fingers and will be approximately 1/4 inch wide.

Causes of stop finger damage:

*Stop fingers too high
*Upper feed rollers too tight
*Register wheels too tight on trailing edge of paper

Stop fingers that are too low will allow the sheet to go over the grippers and over the bar in the receiver end of the duplicator.

Camband damage occurs on the lead edge of the paper in line with the edges of the gage pins. You could have as many as 16 marks across the lead edge, up to 1/16 inch wide.

Causes of camband damage:

*Camband set too fast
*Upper feed rollers set too tight
*Register wheels too tight on trailing edge of paper

The camband set too slow will not allow the sheets to go all the way up to the gauge pins. This will cause the grippers to tear the lead edge of the sheets. This damage will not occur in the same position every time.

The upper feed rollers being too tight will cause a curved wrinkle across the sheet running from the lead edge to the trailing edge of the sheet.

Lower feed rollers too tight will cause the left side corner to bend under.

GLOSSARY

SNAKESLIP - A stick compounded of pumice powder and flint, used for removing dirt spots or unwanted objects on the lithographic pressplate.

CHIEF LITHOGRAPHER'S SHOP SUPERVISOR'S

I need your complete command mailing address to ensure that you will receive your copy of Litho Notes.

INQUIRES/COMMENTS

Lithographer SME
Code 0316
NETPMSA
Saufley Field
Pensacola, FL
32509-5000

(C) (904) 452-1700
(A) 922-1700