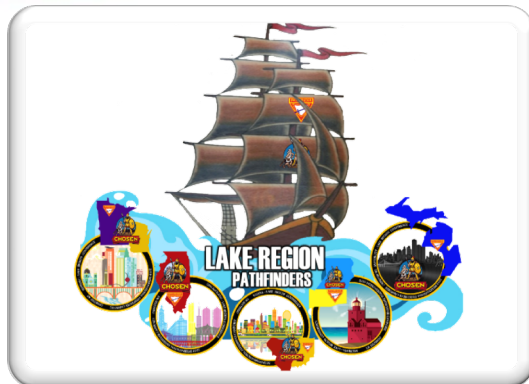


Silk Screen Printing Honor

Clifford Wallace



1. List the tools and equipment necessary for silk screen printing.

- Screen & Frame
- Ink
- Press
- Squeegee
- Photo Emulsion
- Scoop coater
- Substrate
- Painters Tape
- Spray Bottle/Plastic Tub
- Gloves
- Exposure Unit/UV Light
- Black Permanent Marker





2. Name three kinds of inks suitable for silk screen printing.

- Water Based – Soaks into the fabric of the shirt giving a softer feel than plastisol inks. Can dry in the screen causing clogging.
- Plastisol – Sits on top of the fabric of the shirt. One of its main benefits is that it does not dry out in the screen.
- UV Curable – Anti-clogging, dries with UV light reducing the need for a flash dryer or conveyor dryer.
- Discharge Ink – Removes the color of the fabric on the areas where its applied and replaces it with its pigment. This ink is available in both plastisol and water based forms.



3. List at least three industrial uses of the silk screen process.

Screen printing can be used to print on a wide variety of materials, including paper, paperboard, plastics, glass, metals, fabrics, and many other materials. Some common products from the screen printing industry include posters, labels, decals, signage, and all types of textiles and electronic circuit boards.


4. Tell how bottles and round surfaces are printed.

Essentially they are placed on a set of bearing that allow the bottle to rotate or spin as the screen passes over. Downward pressure from a squeegee passing on the screen prints the image on the cylinder while it rotates.


<https://www.youtube.com/watch?v=DDWcIJCONVo>

<https://www.youtube.com/watch?v=JCQfPfhoK84>

<https://www.youtube.com/watch?v=aJPM4cE3AXk>



5. Make a design, transfer the design to a screen, and screen print one of the following projects: a. At least ten greeting cards b. At least three posters c. Print a design on fabric d. Comparable project of your choice



Making a Design

- Designs can be hand drawn or computer generated or a combination of both. The best type of image to use are vector images because they have clean edges that aren't pixelated and this allows for smoother lines when screen printing.
- Applications to use to vector artwork: Photoshop/Illustartor, Inkscape (free), Photopea (online photoshop alt.)
- Opaque (Black). You want no light to be able to shine through your design.



Printing/Transparencies

- Most printing shops can print on transparencies. Make sure they are using ink jet printers and not laser printers.
- Alternative ways to make your own transparency: regular printed image and essential oil.
- Now its time to transfer our design to a screen!!!



Coat Your Screen

- Use a photo emulsion to coat your screen and then let it dry according to specifications in a dark, ventilated area. ***Emulsion is light sensitive and will begin to cure in light***



Expose and Prep your Screen

- After about an hour, take your screen out and place your transparency on the screen and expose the image to the screen.
- After the image is burned into the screen, rinse the screen to reveal the image from the hardened emulsion.
- Tape the edges of the screen to keep ink from passing through the open areas of the screen.
- Place screen in press and prepare ink.



Prep Substrate

- If printing a shirt, spray adhesive to keep shirt from moving. Make sure wrinkles are pressed out. DO NOT HEAT SHIRTS BEFORE PRINTING. This will make the ink begin to cure prematurely and may cause ink to clog the screen.
- If using paper, tape paper down to keep it from moving.
- Place substrate.
- Your're ready to print!!!!



Printing

- Choose the appropriate squeegee and if necessary flood your screen.
- Apply gentle yet firm pressure, holding squeegee at a slight angle and either push or pull the squeegee across the screen.
- Lift screen and determine if another pass is needed. If not, flash the ink to prepare it for removing or doing the next color.



Post-Print

- Heat shirts to manufacturer specs using heat press or conveyor oven.
- Clean screens from ink and use a industrial cleaner to remove ink from the mesh. Store cleaned screens in cool, dry area, as plastisol ink left on screens can begin to thicken in a hot place. Water based inks will clog screen if not properly cleaned out.
- Remember to clean area in a well ventilated space as fumes from cleaning supplies may be harmful if exposed too long to vapors.



Questions?