



Australian Government

ICPSCP339 Prepare stencil using direct projection method

Release: 1

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Modification History

Release	Comments
Release 1	This version first released with ICP Printing and Graphic Arts Training Package Version 1.0.

Application

This unit describes the skills and knowledge required to select, prepare, process and store photographic capillary stencils.

It applies to individuals working in the printing and graphic arts industry who may have to set up and operate power-driven or hand-operated screen printing machines, and who may have to provide leadership and guidance to others and have some limited responsibility for the output of others.

No licensing, legislative or certification requirements apply to this unit at the time of publication.

Unit Sector

Screen printing

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
<i>Elements describe the essential outcomes.</i>	<i>Performance criteria describe the performance needed to demonstrate achievement of the element.</i>
1 Prepare work area	1.1 Work area is made clean and functional prior to commencement of work 1.2 Equipment is inspected to ensure it is functional and, where necessary, appropriate remedial action is taken prior to commencement of work 1.3 Chemicals are prepared, if necessary, according to work health and safety (WHS) requirements and manufacturer or supplier specifications 1.4 Appropriate coating trough (or troughs for automatic coaters) is selected, ensuring it is free of nicks and burrs

ELEMENT	PERFORMANCE CRITERIA
2 Prepare screen	2.1 Screen is selected according to job specifications 2.2 Chemicals are applied and removed according to WHS requirements and manufacturer or supplier specifications
3 Select emulsion	3.1 Emulsion is selected according to requirements for ink type, print resolution, substrate, mesh type and machine type with minimisation of waste 3.2 Emulsion is checked for expiry date and appropriate action taken 3.3 Emulsion is prepared according to WHS requirements, and manufacturer or supplier specifications 3.4 Emulsion is used and dried according to manufacturer or supplier specifications
4 Process material	4.1 Coated screen is positioned on projection frame holder according to manufacturer or supplier specifications 4.2 Projection light source equipment is positioned according to manufacturer or supplier specifications 4.3 Positive is positioned into projection light source which is then set to desired enlargement according to manufacturer or supplier specifications 4.4 Exposed screen is removed from positioning frame according to WHS requirements and manufacturer or supplier specifications 4.5 Exposed screen is washed out according to WHS requirements and manufacturer or supplier specifications 4.6 Processed stencil or screen is inspected for processing flaws
5 Dry stencil	5.1 Processed stencil is dried according to manufacturer or supplier specifications 5.2 Backing sheet is carefully removed and stencil checked for full adhesion
6 Block out screen	6.1 Non-image areas of prepared screen are blocked out with filler suitable for ink type and according to job specifications 6.2 Stencil is inspected for flaws, scum and orientation 6.3 Pinholes are spotted out with suitable filler and taped according to ink type and job specifications
7 Store screen	7.1 Prepared screen is labelled according to enterprise specifications 7.2 Prepared screen is stored in clean, dry environment according to manufacturer or supplier specifications

Foundation Skills

This section describes language, literacy, numeracy and employment skills incorporated in the performance criteria that are required for competent performance.

Skill	Performance Criteria	Description
Reading	1.3, 2.1, 2.2, 3.2-3.4, 4.1-4.5, 5.1, 6.1, 7.2	- Establishes job requirements from relevant information - Identifies correct process from procedural documentation
Writing	7.1	Completes routine labelling associated with production and enterprise processes
Numeracy	1.3, 4.3	Uses simple mathematical processes to calculate amounts of chemicals and coating times
Navigate the world of work	1.3, 2.2, 3.3, 4.4, 4.5, 7.1, 7.2	Complies with organisational, legal and regulatory requirements related to own work, with specific reference to safety
Get the work done	1.1, 1.2, 1.4, 2.1, 3.1, 3.2, 3.4, 4.1-4.6, 5.1, 5.2, 6.1-6.3	- Takes responsibility for planning and organising own workload, identifying ways of sequencing and combining elements for efficiency - Automatically implements standard procedures for routine decisions - Recognises and takes responsibility for addressing predictable problems in familiar work contexts - Understands the purposes, specific functions and key features of common digital systems and tools, and operates them effectively to complete routine tasks

Unit Mapping Information

Code and title current version	Code and title previous version	Comments	Equivalence status
ICPSCP339 Prepare stencil using direct projection method	ICPSP339C Prepare stencil using direct projection method	Updated to meet Standards for Training Packages	Equivalent unit

Links

Companion Volume implementation guides are found in VETNet -

<https://vetnet.gov.au/Pages/TrainingDocs.aspx?q=a74b7a0f-a253-47e3-8be0-5d426e24131d>

Assessment Requirements for ICPSCP339 Prepare stencil using direct projection method

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Performance Evidence

Evidence of the ability to:

- safely prepare TWO different screens using the direct projection method according to all job, manufacturer, enterprise and work health and safety (WHS) requirements.

Note: If a specific volume or frequency is not stated, then evidence must be provided at least once.

Knowledge Evidence

To complete the unit requirements safely and effectively, the individual must:

- identify the influence that mesh count has on final printed product
- explain the importance of correctly tensioned screen and describe the tension that is required on screens of various mesh count or grades
- describe the degreasing or cleaning techniques that are employed prior to coating the screen
- summarise the information contained in the material safety data sheet (MSDS) about emulsion
- discuss the pollution and environmental issues that need to be considered when working with emulsions
- identify the maintenance that is required on the direct projection camera
- outline the importance of working in a safelight area when using the direct projection method
- describe the kinds of high sensitivity emulsions that are available and explain their characteristics, lifespans and areas of use, including the preparation method for the emulsion being used
- identify the influence that length of run and ink being used have on the coating technique
- identify the number of coats of emulsion and the best method of coating the screen, as well as the best position (horizontal or vertical) for drying the screen to prevent scum and streaking

- identify the effect of heat on the emulsion during the drying process
- outline health and safety concerns when exposing the screen
- describe the operating features of the direct projection camera
- explain how to set the enlargement factor and take into account registration on the frame for the appropriate printing machine
- describe the exposure techniques and procedures that are used and how to calculate exposure time
- identify the effect of temperature, pressure and period of washing on the emulsion, including how to determine when washing out is complete
- outline the post-curing effect on the stencil
- summarise the information that is obtained from the MSDSs for a particular blackout
- explain how ink and stencil type influence the choice of blackout
- outline the preventive measures that can be taken to minimise pinholes and the importance of taping the edge of the frame
- describe how a screen can be identified at a later date
- identify required manuals, safety and other documentation and briefly outline the relevant information in each source.

Assessment Conditions

Gather evidence to demonstrate consistent performance in conditions that are safe and replicate the workplace. Noise levels, production flow, interruptions and time variances must be typical of those experienced in the screen printing field of work and include access to direct electronic imaging equipment.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

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