



Australian Government

ICPPRN4210 Set up for complex gravure printing

Release: 1

ICPPRN4210 Set up for complex gravure printing

Modification History

Release	Comments
Release 1	This version first released with ICP Printing and Graphic Arts Training Package Version 4.0.

Application

This unit describes the skills and knowledge required to set up non-routine gravure printing machines for complex print jobs. It includes the ability to conduct a proof run and adjust settings to ensure production speeds are attained.

It applies to individuals working as print machinists in the printing and graphic arts industry. They prepare material, set up, monitor and operate equipment and machinery, apply solutions to a defined range of problems associated with the print medium and analyse and evaluate information from a variety of sources. They may also provide leadership and guidance to others with 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

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 for job	1.1 Identify job requirements 1.2 Set up required printing machinery according to manufacturer specifications 1.3 Confirm availability of all job components
2. Set up reels	2.1 Set up and adjust unwind and rewind reels 2.2 Carry out webbing procedures 2.3 Set up and adjust web-control system

ELEMENT	PERFORMANCE CRITERIA
	2.4 Splice and join reels as required 2.5 Prepare and adjust printed web viewing devices 2.6 Set up and adjust folder and sheeter 2.7 Prepare and adjust set off and marking prevention devices as required
3. Select and prepare inks and additives	3.1 Select inks, dyes and additives required according to job specifications and end-user requirements and confirm they meet quality requirements 3.2 Prepare inks, dyes and additives according to work health and safety (WHS) requirements, and manufacturer specifications 3.3 Mix and prepare colour and volume of ink to match requirements of the printing process and job specifications 3.4 Approve and record formulation of ink, colour match and approved colour 3.5 Label, handle and store inks, dyes and additives according to manufacturer specifications
4. Set up machine for complex gravure printing	4.1 Select, install, set up and adjust gravure cylinders 4.2 Prepare and adjust impression roller 4.3 Set up and adjust inking system and doctor blade as required 4.4 Set up and adjust drying system
5. Conduct proof run	5.1 Operate machine according to manufacturer specifications and enterprise procedures to produce specified proof 5.2 Inspect and test proof as required according to enterprise procedures 5.3 Seek client approval and authority prior to the production run as required 5.4 Interpret results and make adjustments according to product and machine specifications as required

Foundation Skills

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

Skill	Description
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Writing	• Completes records and documents according to workplace requirements
Self-management	• Complies with enterprise procedures relevant to own role • Implements actions according to instructions, making adjustments if necessary
Teamwork	• Follows accepted communication practices and protocols when seeking approval to commence production
planning and organising	• Takes responsibility for planning and organising own workload using analytical processes to decide on a course of action, and assembles required resources
Problem solving	• Responds to predictable problems and implements standard or logical solutions related to role in immediate work environment
Technology	• Reads data from electronic monitoring and control systems

Unit Mapping Information

Supersedes and is equivalent to ICPPRN421 Set up for complex gravure printing.

Links

Companion Volume Implementation Guide is found on VETNet -

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

Assessment Requirements for ICPPRN4210 Set up for complex gravure printing

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Performance Evidence

The candidate must demonstrate the ability to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including evidence of the ability to:

- set up a gravure printing machine for a complex job on two occasions according to manufacturer specifications and enterprise procedures.

In the course of the above the candidate must:

- demonstrate use of control, monitoring and data entry systems.

Knowledge Evidence

The candidate must be able to demonstrate knowledge to complete the tasks outlined in the elements, performance criteria and foundation skills of this unit, including knowledge of:

- enterprise procedures, manufacturer specifications and work health and safety (WHS) risks and requirements for:
 - installing printing cylinders on the machine
 - setting up and operating the machine and delivery section
 - webbing up the machine
 - slitting on the machine
 - preparing inks and additives
- enterprise escalation procedures and required personnel
- required print sequence
- the visual aid on the cylinder that identifies ink colour to be used
- precautions required to ensure cylinders are not damaged during installation
- inks required in the printing process, their attributes, functions, tests and common issues
- ink and additive labelling and storage procedures, and ink shelf life
- doctor blades, their application, and correction methods for any issues that may arise
- components of the web-fed system, their function, common issues and adjustment parameters
- techniques and procedures for:

- controlling the ratio of print to in-line speed
- determining make ready speed for job and communicating steps to team members
- metallising substrates and testing metallised surface for coating thickness and printing side
- problems arising from:
 - incorrect brake or rewind tension
 - excess printing and slitter pressure
 - using an over-reduced ink
 - excessive use of slow solvents
 - cold seals in printing
- purpose and functions of:
 - air blast in sheet delivery
 - additives in gravure inks
 - punching a printed product
 - dwell when cutting or creasing in-line
 - grading drying speeds of each progressive colour
 - using thermal imaging face stocks
- the causes of various errors and faults, and correction methods, such as:
 - deviations in required web or print area tension
 - a telescopic roll
 - picking in printing multi-coloured work
- special end-use requirements
- viscosity checks, automatic controllers and correction procedures
- precautions required to minimise waste when preparing ink
- drying procedures required for a job and key precautions
- pre-heat web temperature required for lamination
- effect of annealing on aluminium foil
- client requirements for bar codes
- instrument used to identify retained solvent trapped in the print
- enterprise personnel with responsibility for final say regarding job approval
- manufacturer manuals, enterprise procedures and work health and safety documentation, including their location and purpose.

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 printing field of work and include access to:

- special purpose tools, equipment and materials
- gravure printing machinery.

Assessors of this unit must satisfy the requirements for assessors in applicable vocational education and training legislation, frameworks and/or standards.

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