



Australian Government

ICPPRN3320 Produce complex lithographic printed product

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 4.0.

Application

This unit describes the skills and knowledge required to produce complex lithographic printed product, ensuring an efficient non-routine production flow that maintains product quality standards.

It applies to individuals who work under direct supervision and have some responsibility in ensuring production process is maintained by anticipating production problems and monitoring equipment and machinery.

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. Maintain non-routine operation of delivery system	1.1 Monitor and adjust delivery systems according to work health and safety (WHS) requirements 1.2 Add substrate to and remove substrate from the process according to job specifications
2. Maintain complex lithographic printing process	2.1 Review and adjust non-routine lithographic plate and plate cylinder condition 2.2 Review and adjust non-routine lithographic blanket and blanket cylinder condition 2.3 Review and adjust non-routine lithographic impression cylinder

ELEMENT	PERFORMANCE CRITERIA
	condition 2.4 Check and maintain non-routine lithographic inking system 2.5 Monitor and adjust non-routine lithographic dampening system 2.6 Monitor and adjust set off and marking prevention, and drying systems
3. Maintain production process	3.1 Use machine controls as required 3.2 Review and verify performance using the process control system 3.3 Check and adjust ink performance, colour, register and position 3.4 Report process adjustments to eliminate problems according to enterprise procedures
4. Identify and rectify lithographic machine operating problem	4.1 Identify and report problems in machine operation according to enterprise procedures 4.2 Carry out adjustments or corrections according to specified procedures, and within scope of own role 4.3 Verify repairs and adjustments as required prior to resumption of operations
5. Conduct shutdown of production process	5.1 Follow shutdown sequence according to manufacturer specifications and enterprise procedures 5.2 Label and store unused ink and embellishment equipment according to manufacturer specifications and enterprise procedures 5.3 Remove solid and liquid waste from operating area and recycle and dispose of, as required, according to regulatory requirements and enterprise procedures 5.4 Clean and disengage all required parts of machinery used in printing process according to manufacturer specifications and enterprise procedures 5.5 Complete required production records and enterprise documentation

Foundation Skills

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

Skill	Description
Writing	Enters routine data associated with production processes and enterprise procedures
Numeracy	Interprets and analyses a range of mathematical information that is used in familiar and routine tasks
Self-management	- Recognises and follows explicit and implicit protocols and meets expectations associated with own role - Recognises and follows all procedures for cleaning and maintenance of equipment, incorporating regulatory requirements and enterprise procedures
Teamwork	- Cooperates with others as part of familiar routine activities, and contributes to specific activities requiring joint responsibility and accountability - Understands what to communicate, with whom and how, in routine work situations
Planning and organising	Determines priorities and sequences steps involved in clearly defined, familiar tasks
Problem solving	Recognises and anticipates an increasing range of familiar problems, their symptoms and causes, actively looking for early warning signs and implementing contingency plans
Technology	Follows routine procedures for using digital technology by reading data from electronic monitoring and control systems

Range of Conditions

This section specifies different work environments and conditions that may affect performance. Essential operating conditions that may be present (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) are included.

Delivery systems must include either:	- reel or - sheet
Monitoring and adjusting must include either:	- reel stand and rewind sections - web control system - sheeting section - set off / marking prevention systems or - feeder and delivery systems

	• sheet pick-up and transportation system • transfer systems • set/ off/marking prevention system
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Unit Mapping Information

Supersedes and is equivalent to ICPPRN332 Produce complex lithographic printed product.

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 ICPPRN3320 Produce complex lithographic printed product

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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:

- demonstrate use of control, monitoring and data entry systems
- monitor production output and make necessary adjustments to maintain print quality on a lithographic machine while producing a complex print on two occasions.

In the course of the above the candidate must:

- operate production process in association with fellow workers and according to enterprise procedures and planned daily schedule
- follow work health and safety (WHS) requirements, manufacturer specifications and enterprise procedures
- anticipate production difficulties and take preventive action to prevent occurrence.

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 and manufacturer procedures, and WHS requirements for:
 - setting up and operating the sheet and reel delivery and transportation systems
 - rewinding in the reel delivery system
 - handling inks and materials
 - cleaning parts of the machine and waste disposal
 - enterprise escalation procedures and required personnel
- causes of:
 - the reel wandering and web breaking at the unwind unit
 - the sheet cut-off wandering
 - mis-register when the sheet is in the feeder
 - an uneven feeder stack

- the web jamming up in the folder
- blanket packing-creep during printing
- ink lying back in the duct and ink stripping on the inking rollers
- conductivity of the fountain solution changing over an eight hour shift
- UV ink drying and substrate blistering
- problems that arise from the following and their correction methods:
 - the reel being run out of centre
 - poorly adjusted nip rollers in rewinding and sheeting
 - worn suckers at the feeder suction head
 - gripper malfunction on sheet control and transfer
 - the feeder stack not being loaded levelly
 - excessive pressure on the slitters
 - dirty formers and adjusting rollers at their base
 - defective pins in the folder
 - grippers not being set as required in the machine transfer section
 - plates developing a crack at grip edge during a print run
 - blankets not being tensioned as required
 - excessive use of fountain solution on the plate
 - excessive conductivity
 - drying temperature being too low in the chillers or incorrect on finished product
 - inadequate communication within the work team
- features and functions, common issues and faults and methods to resolve them for the following machine sections in all systems:
 - transportation
 - delivery
 - in-line processing units
 - printing units
 - the rewind unit
- client communication standards and approval process for a finished product
- plate storage procedures
- machine problems where service personnel must be contacted and reporting procedures
- labelling procedures for printed reels and their purpose
- effect of machine speed on sheet delivery
- difference between a “flying paster” and “zero speed” type reel-stand
- visible signs of the sheet being registered in the feeder and by side lay
- link between driers, set-off and marking, and use of anti-set-off powder in delivery
- the enterprise personnel responsible for removing machine guards and disconnecting micro switches and its effects
- disadvantages of using a closed looped system for automatic control of the printed product
- available measurements besides optimum solid ink density used to assess print quality

- actions required when production problems are anticipated and further processing of unacceptable printed product must be eliminated
- use of completed records in final job analysis and their benefits in production of future jobs
- 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
- lithographic printing machine.

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

Links

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