



Australian Government

Department of Education, Employment and Workplace Relations

ICPPR321C Set up for basic gravure printing

Revision Number: 1

ICPPR321C Set up for basic gravure printing

Modification History

Not applicable.

Unit Descriptor

Unit descriptor	This unit describes the performance outcomes, skills and knowledge required to set up for routine gravure printing.
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Application of the Unit

Application of the unit	This unit requires the individual to set up gravure printing machines for routine print jobs. The individual will conduct a proof run and adjust settings to ensure production speeds are attained.
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Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisite units		

Employability Skills Information

Employability skills	This unit contains employability skills.
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Elements and Performance Criteria Pre-Content

<p>Elements describe the essential outcomes of a unit of competency.</p>	<p>Performance criteria describe the performance needed to demonstrate achievement of the element. Where bold italicised text is used, further information is detailed in the required skills and knowledge section and the range statement. Assessment of performance is to be consistent with the evidence guide.</p>
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Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1. Confirm routine job specifications	1.1. Job requirements are read and interpreted from job documentation or production control system 1.2. Set up is carried out correctly in minimum time with minimum wastage 1.3. Availability of all job related components is checked
2. Set up reels	2.1. Unwind and rewind reels is are set up and adjusted according to job specifications 2.2. Webbing procedures are carried out according to job specifications 2.3. Web-control system is set up and adjusted according to job specifications 2.4. Reels are spliced/joined according to job specifications 2.5. Printed web viewing devices are set up and adjusted according to job specifications 2.6. The folder and sheeter are set up and adjusted according to job specifications 2.7. Set off/marketing prevention devices are set up and adjusted according to job specifications
3. Select and prepare inks and additives (basic)	3.1. Inks , dyes or additives are selected according to job specifications and end-user requirements 3.2. Quality and suitability of inks, dyes or additives are checked and appropriate action is taken 3.3. Inks, dyes and additives are prepared according to OHS requirements, and manufacturer's/supplier's instructions with suitable precautions to minimise waste 3.4. Correct colour and weight/volume of ink are mixed and prepared to match the requirements of the printing process and job specifications 3.5. Formulation of the ink, colour match and the approved colour are appropriately recorded 3.6. Inks, dyes and additives are appropriately labelled, handled and stored according to manufacturer's/supplier's instructions to prevent damage and hazards to personnel and prolong shelf life
4. Set up machine for basic gravure printing	4.1. Gravure cylinders are selected, installed, set up and adjusted according to job specifications 4.2. Impression roller is set up and adjusted according to job specifications

ELEMENT	PERFORMANCE CRITERIA
	4.3. Inking system/doctor blade is set up and adjusted according to the gravure process and job specifications 4.4. Drying system is set up and adjusted according to job specifications
5. Conduct proof run	5.1. Material to be used for proof is organised correctly 5.2. <i>Machine</i> is operated according to manufacturer's and enterprise procedures to produce a specified proof 5.3. Proof is visually inspected and/or tested or laboratory testing organised according to enterprise procedures 5.4. Production does not commence without client OK or authority where appropriate 5.5. If necessary, results are interpreted and adjustments made according to product and machine specifications

Required Skills and Knowledge

REQUIRED SKILLS AND KNOWLEDGE

This section describes the skills and knowledge required for this unit.

Required skills

- OHS in relation to operating machinery such as safely switching off machinery before cleaning is started
- communication of ideas and information by interpreting job tickets and requirements
- collecting, analysing and organising information by collecting and assessing data about printing process and machine specifications and characteristics and how these interact
- planning and organising activities by providing input into production scheduling about time requirements for set up to ensure efficient operation
- teamwork when working with other workers to coordinate set up to ensure efficient operation
- mathematical ideas and techniques by calculating cylinder position and substrate requirements for the job
- problem-solving skills by recognising proofing faults and determining adjustments to correct them
- use of technology by using monitoring equipment and interpreting readouts

Required knowledge

- vital information required on job ticket
- checks prior to set up (availability of materials etc.)
- correct cylinders chosen for the job
- important considerations when handling gravure cylinders
- parts of the unit that need to be checked to ensure the cylinder is correctly installed
- OHS factors that need to be considered when operating the reel in-feed and delivery systems
- how the printing side of the material is chosen
- what would be the effect of low web tension on the print
- what other types of web splices could be used appropriately for the job
- risks associated with the rewind of the machine
- what would be the effect of excessive web tension at the rewind of the machine
- what are the environmental and OHS concerns with regard to inks and additives
- how is the suitability of ink matched to the particular job
- what would happen if the ink were too viscose
- how would an ink that was slightly light be modified to meet the needs of the job
- what methods are available to check the ink for correct colour
- who passes the colour prior to running the job
- what precautions are necessary when handling doctor blades

REQUIRED SKILLS AND KNOWLEDGE

- how are the machine specifications determined, relating to the specific job
- what steps should be taken to ensure that the inking system was adjusted correctly
- why is the inking system ink level maintained at a certain level
- what is the optimum make ready speed for the job
- what steps are taken to incorporate the in-line processes into the make ready
- how is the equipment used in in-line processing protected against damage during set up
- what methods can be used to minimise waste during make ready
- what procedures are undertaken to have the print approved
- what quality control measurements should be applied to the proof to test against known standards
- what do you check on the initial print prior to running
- how are the settings to be adjusted determined
- what process is used to plot the success of the machine adjustment
- how are the final results recorded for future reference
- what machine manuals, safety and other documentation are relevant to this task and where are they kept and information included in these documents

Evidence Guide

EVIDENCE GUIDE	
<p>The Evidence Guide provides advice on assessment and must be read in conjunction with the performance criteria, required skills and knowledge, range statement and the Assessment Guidelines for the Training Package.</p>	
Overview of assessment	
Critical aspects for assessment and evidence required to demonstrate competency in this unit	<p>Evidence of the ability to:</p> <ul style="list-style-type: none"> correctly set up gravure printing machines for routine print jobs. The individual will conduct a proof run and adjust settings to ensure production speeds are attained demonstrate use of computerised control, monitoring and data entry systems if available and appropriate demonstrate an ability to find and use information relevant to the task from a variety of information sources demonstrate all safety devices on the machine set up a press on TWO occasions for basic gravure printing (if possible including at least ONE in-line process) according to manufacturer's specifications, enterprise procedures and the Performance Criteria evidence for assessment may be gathered from assessment of the unit of competency alone or through an integrated assessment activity.
Context of and specific resources for assessment	<p>Assessment must ensure:</p> <ul style="list-style-type: none"> assessment may take place on the job, off the job or a combination of these. Off the job assessment must be undertaken in a closely simulated workplace environment gravure printing machine with in-line units.
Method of assessment	<p>A range of assessment methods should be used to assess practical skills and knowledge. The following examples are appropriate for this unit:</p> <ul style="list-style-type: none"> direct questioning combined with review of portfolios of evidence and third party workplace reports of on-the-job performance by the candidate.
Guidance information for assessment	<p>Holistic assessment with other units relevant to the industry sector, workplace and job role is recommended, for example:</p> <ul style="list-style-type: none"> ICPSU201C Prepare, load and unload reels and cores

EVIDENCE GUIDE

	<p>on and off machine</p> <ul style="list-style-type: none">• ICPSU207C Prepare machine for operation (basic)• ICPSU211C Prepare ink and additives• ICPPR322C Produce basic gravure printed product.
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Range Statement

RANGE STATEMENT	
<p>The range statement relates to the unit of competency as a whole. It allows for different work environments and situations that may affect performance. Bold italicised wording, if used in the performance criteria, is detailed below. Essential operating conditions that may be present with training and assessment (depending on the work situation, needs of the candidate, accessibility of the item, and local industry and regional contexts) may also be included.</p>	
<i>Inks/coatings</i> may include:	<ul style="list-style-type: none"> • range of standard inks commonly used in 1-2 colour printing
<i>Colour matching systems</i> may include:	<ul style="list-style-type: none"> • use of visual colour assessment and densitometry to match basic standard colours under controlled lighting conditions..
<i>Machines</i> may include:	<ul style="list-style-type: none"> • a range of in-line gravure printing machines with manual, semi-automated, fully automated or computerised process control.
<i>Design</i> may include:	<ul style="list-style-type: none"> • 1-2 colours, simple graphics and text. Minor variations in registration and position.
<i>In-line processes</i> may include:	<ul style="list-style-type: none"> • minor processes that are integral to this competency can include basic in-line operations such as perforating, numbering, date coding, slitting that do not in themselves constitute another defined unit of competency. Where a major in-line process is defined as a separate competency (eg flat-bed cutting, folding) it should be assessed as such.
<i>Substrate types</i> may include:	<ul style="list-style-type: none"> • range of substrates within the major categories of paper, board, or plastics or metal • wide or narrow reel handling systems.
<i>Wide or narrow reel handling systems</i> may include:	<ul style="list-style-type: none"> • working to defined procedures under limited supervision.
<i>Routine</i> may include:	<ul style="list-style-type: none"> • routine within this context relates to the set up and production of print runs. The set up of equipment and production is straightforward and does not involve a significant amount of deviation from using standard equipment settings. In this sense, routine does not refer to a job that an individual might repeat on a regular basis.

Unit Sector(s)

Unit sector	
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Competency field

Competency field	Printing
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Co-requisite units

Co-requisite units		