



Australian Government

Assessment Requirements for ICPPRN413 Set up for complex flexographic printing

Release: 1

Assessment Requirements for ICPPRN413 Set up for complex flexographic printing

Modification History

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

Performance Evidence

Evidence of the ability to:

- set up flexographic printing machines for non-routine print jobs, 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
- set up a flexographic printing machine for a complex job on TWO occasions (if possible using different substrates and if possible including at least two in-line processes) according to manufacturer's and job specifications, and enterprise procedures.

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:

- describe production problems that could be created by not reading or understanding the job specifications
- list work health and safety (WHS) factors to consider when mounting and proofing flexographic plates
- describe the most common cause of photopolymer plates crazing on the image side
- explain the importance of printing plate resiliency
- list main advantages of using thin photopolymer plates in process printing
- outline faults that may be detected on new plates
- identify types of solvents used on photopolymer plates
- describe benefits of optical mounting
- explain the purpose of binding plates after mounting
- outline possible print faults that could be eliminated by using a cushion mount
- list WHS factors to consider when installing printing cylinders or sleeves

- describe precautions to ensure the plates and cylinders or sleeves are not damaged during installation
- explain what to check to ensure plates and cylinders or sleeves have been installed correctly
- list WHS precautions to be observed when webbing up the machine
- explain how to determine position of the reel
- demonstrate how the substrate is pulled into the machine
- outline consequences of insufficient unwind tension
- describe consequences of excessive unwind tens
- outline the function of the 'Dancer' roller on a web machine
- explain the function of the PIV unit
- demonstrate knowledge of how to make adjustments to the PIV
- describe the function of the lay-on roller
- outline effects of excessive lay-on roller pressure
- describe what can happen if the web is not spliced correctly
- explain how the particular web viewing device works
- list WHS precautions for setting up the delivery
- explain how the web is controlled in the rewind unit
- describe the result of incorrect rewind tension
- outline remedial steps if there is a possibility of ink marking in the rewind
- explain the function the air blast plays in the delivery of sheets
- list WHS precautions for preparing inks and additives
- identify details to check an ink's suitability for the printing process
- outline special end-use requirements that may be necessary
- describe the main functions of a pigmented extender used in flexographic printing
- explain the purpose of adding plasticisers to flexographic inks
- list additives used in flexographic inks
- outline the range, in seconds, for Zahn cup measurements
- describe the effect foaming has in a Zahn cup when measuring ink viscosity
- identify recommended pH range when printing with aqueous inks
- list precautions to observe to minimise waste when preparing ink
- describe how to determine shelf life of most inks
- outline conditions relevant to storing inks and additives
- list conventions for labelling mixed ink
- list WHS factors to consider when setting up the machine
- identify advantages of centring all machine controls
- describe checks to be made on cylinders and gears
- outline checks to do prior to cylinder or sleeve installation
- identify the angle chamber blades should be set at
- outline the main advantage of gauging up and dry register prior to printing a job
- describe the cell count of the anilox roller used when printing solids
- explain why water treatment additives should be used in a central impression drum and chill roller coolant system

- list advantages of laser engraved ceramic anilox rollers
- demonstrate knowledge of the anilox roller and what it measures
- list possible reasons for anilox wear
- describe the type of job printed using a hexagonal cell configuration
- identify the recommended web temperature when printing polypropylene film
- explain the method of drying used when printing on polythene by the flexographic process
- list factors affecting drying rate of liquid inks
- list factors affecting drying of aqueous inks
- identify the operating range of UV lamps
- list WHS precautions to be observed when slitting on the machine
- explain how a cold seal is formed
- outline reasons for a printed product to be punched
- describe what to consider when setting hole punching in relation to repeat length
- outline consequences of excessive pressure on the slitters
- describe why it is necessary to graduate drying speeds of each progressive colour, so first-down colours dry faster than the subsequent colours
- explain why, in flexographic printing, that as press speed increases so does colour strength
- list causes of a decrease in web tension
- outline consequences of increasing rewind tension after the roll has been partially rewound
- identify the major cause of a telescopic roll
- describe print characteristics related to excessive printing pressure
- list causes of picking when printing multicoloured work
- identify print faults from using an over-reduced ink
- outline problems that can cause lateral streaks in uneven printing
- describe causes of moiré patterns when printing by the flexographic process
- outline consequences of air being trapped under mounted plates
- name the instrument used to identify retained solvent trapped in the print
- explain the purpose of taking Dyne readings
- explain the purpose of the crinkle test when testing an ink
- outline consequences if an excessive final drying temperature was used when printing polypropylene film
- identify the ink property that can be adjusted to reduce dot gain
- demonstrate understanding of correctly checking ink viscosity while using ink pumps
- identify problems resulting from excessive use of slow solvents
- explain why laminating inks, once printed, appear dull and become easy to scratch
- outline the result of excessive print area tension
- list some of the problems the printer may associate with cold seals
- locate machine manuals, safety and other documentation relevant to this task, and outline information included in these documents.

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, including a narrow flexographic press.

Assessors must satisfy NVR/AQTF assessor requirements.

Links

Companion Volume implementation guides are found in VETNet -

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