Dye fabric in a beam dyeing machine

Level 3  
Credits 12  

Purpose  
This unit standard is for people working in the dyeing and finishing industry.  
People credited with this unit standard are able to: demonstrate knowledge of beam preparation and dyeing; prepare and operate a beam dye machine; and carry out batch end procedures.

Subfield  
Textiles Manufacture  
Domain  
Textile Dyeing and Finishing  
Status  
Registered  
Status date  
17 April 2009  
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31 December 2013  

Entry information  
Recommended for entry: Unit 5392, Demonstrate knowledge of textile dyeing and finishing safety, or demonstrate equivalent knowledge or skills.

Accreditation  
Evaluation of documentation and visit by NZQA and industry.

Standard setting body (SSB)  
Competenz  

Accreditation and Moderation Action Plan (AMAP) reference  
0030  
This AMAP can be accessed at http://www.nzqa.govt.nz/framework/search/index.do.

Special notes  
1 Dyeing is considered to include all pre-treatments, dyeings, and post-treatments carried out in the dye machine.  
3 The disposal or discharge of chemicals, dyestuffs, wastes and packaging materials must be carried out according to the requirements of the Resource Management Act 1991.
4 Definitions

Workplace procedures refer to the verbal or documented procedures for performing activities including health and safety, operational, environmental, and quality management requirements. They refer to manuals, manufacturer's specification, codes of practice, or policy statements.

Product specifications refer to the document which accompanies each manufacturing order. This specifies all of the parameters for production of the yarn batch. This may include the fibre specification, the shade, dye bath parameters, machinery to be used and finishing procedures.

Elements and performance criteria

Element 1

Demonstrate knowledge of beam preparation and dyeing.

Performance criteria

1.1 Beam preparation is described in terms of the factors that affect dyeing performance.

Range beam cover and wrapping, fabric tension and alignment on beam, position of beam blanking sleeve.

1.2 Beam dyeing is described in terms of the process steps.

Range beam preparation, pre-dyeing treatments, dyeing cycle, post-dyeing treatments, rinsing, unloading, liquor discharge and disposal.

1.3 Dyes and chemicals used in the workplace for beam dyeing are described in terms of their nature, function, and safe handling requirements.

Range dyestuffs, dyeing assistants, auxiliary chemicals.

1.4 Beam dye vessel and related equipment are described in terms of their function and operation.

Range dye vessel, beam carrier, circulation system, addition tanks, dye vessel controls and interlocks, pressurising system when fitted.

Element 2

Prepare and operate a beam dye machine.

Performance criteria

2.1 Machine is emptied and cleaned to prevent contamination from the previous dyeing.
2.2 Machine is prepared and operated according to product specifications and workplace procedures.

Range vessel filled, dye vessel controls set, beam loaded, chemicals added in specified sequence and circulated, dyestuff added in specified sequence and circulated, flow sequence and direction set, flow pressure set.

2.3 Vessel is operated according to workplace procedures.

2.4 Process conditions are maintained according to product specifications.

2.5 Samples taken are representative of the batch.

2.6 Dye and chemical additions are carried out according to product specifications.

2.7 Records are maintained according to workplace procedures.

Element 3

Carry out batch end procedures.

Performance criteria

3.1 Beam is removed from machine and handled according to workplace procedures.

3.2 Liquor is discharged from machine according to workplace procedures.

3.3 Machine and work area are cleaned to prevent contamination.

3.4 Any machine faults are reported according to workplace procedures.

Range faults can include leaks from pumps, leaks at drains, control malfunctions, door mechanism malfunction.

Please note

Providers must be accredited by NZQA, or an inter-institutional body with delegated authority for quality assurance, before they can report credits from assessment against unit standards or deliver courses of study leading to that assessment.

Industry Training Organisations must be accredited by NZQA before they can register credits from assessment against unit standards.

Accredited providers and Industry Training Organisations assessing against unit standards must engage with the moderation system that applies to those standards.
Accreditation requirements and an outline of the moderation system that applies to this standard are outlined in the Accreditation and Moderation Action Plan (AMAP). The AMAP also includes useful information about special requirements for organisations wishing to develop education and training programmes, such as minimum qualifications for tutors and assessors, and special resource requirements.

Comments on this unit standard

Please contact Competenz info@competenz.org.nz if you wish to suggest changes to the content of this unit standard.