

## Operate industrial knitting machines

**Level** 3

**Credits** 10

**Purpose** This unit standard is for operators and mechanics of all types of industrial knitting machines.

People credited with this unit standard are able to: operate industrial knitting machines; repair yarn-related faults at the knitting head and fabric press-offs; operate process machines ancillary to the knitting production; identify and sort wastes; and demonstrate knowledge of yarn-related faults in knitted fabrics.

**Subfield** Industrial Machine Knitting

**Domain** Knitting Machine Operation

**Status** Registered

**Status date** 19 March 2010

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**Entry information** Open.

**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>.

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### Special notes

- 1 This unit standard applies to all sectors of the knitting industry.
- 2 This unit standard relates to the operation of a single category of knitting machines, such as flat bed machines, or pantyhose machines, or circular piecegoods machines, or tricot machines, and so on, and to any ancillary machines associated with the production from that category of machines.

- 3 This unit standard relates to the operation of one or more machines that constitutes an operator-load, as determined by trade and/or company practice.
- 4 This unit standard applies to the predominant category of machines the person is operating at the time of assessment.
- 5 Performance of the elements must comply with the requirements of the Health and Safety in Employment Act 1992.
- 6 Technical aspects that are required to be covered in demonstrating competence in this unit standard may include any or all of the following, depending on the machines used in the workplace:
  - a application of occupational safety and health procedures, including the use of first aid equipment and safe lifting practices;
  - b yarn-jointing, either by hand to company standards, or by hand-held knotting or splicing devices;
  - c stopping and starting knitting machines;
  - d production examination for faults, and defects;
  - e correct yarn-paths for the machines being operated;
  - f use of specific lubricants;
  - g fault-correction, including fixing small and large press-offs by the methods appropriate to the category of machine;
  - h processing of documentation;
  - i recognition of yarns in use by labelled descriptions and identifiers, which may include:
    - i yarn count, denier or linear density description;
    - ii batch number or merge number;
    - iii fibre content;
    - iv colour description;
    - v direction of twist in single-end false-twist yarns;
    - vi identification of yarns by colour-coding on yarn-winding packages;
  - j on machines with a separate system for controlling the garment style, the ability to reset the control system for restarts.
- 7 The separation and sorting of wastes relates to the yarn and fabric wastes made during the normal course of an operating day such as the ends of yarn resulting from yarn-jointing, yarns pulled off badly-wound packages to allow them to run smoothly, yarn stripped off the ends of packages or beams to clear them, and fabric wastes are short pieces such as those made in trimming up the roll ends of piecegoods or after pattern or style changes, or after setting new warps in.
- 8 Recognition and knowledge of faults may be assisted by compiling files of faults and giving descriptions to them under suitable headings. An example of one such method and procedure is as follows:
  - a fault – its technical name, or similar short description;
  - b appearance – the distinguishing features of the fault in the fabric that enable it to be recognised;
  - c cause – the likely causes of the fault;
  - d effect – the impact the fault has on the properties or usability of the fabric;
  - e responsibility – the role holder responsible for the correction of the fault;

- f action – measures to be taken to correct the fault, by the operator or through the company fault-reporting procedures;
- g prevention – measures to be taken to prevent or minimise recurrence of the fault.

## 9 Definition

*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, manufacturers' specifications, codes of practice, or policy statements.

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## Elements and performance criteria

### Element 1

Operate industrial knitting machines.

#### Performance criteria

- 1.1 Machines are operated in accordance with workplace procedures.
- 1.2 Yarns are run through correct yarn-paths at operating tensions according to machine-builder's instructions and workplace procedures.
- 1.3 Yarns are creeled and ends joined in accordance with workplace procedures.
- 1.4 Production is monitored for faults, and variations notified, in accordance with workplace procedures.
- 1.5 Machines are monitored for continuous functioning of all systems, and variations notified, in accordance with workplace procedures.
- 1.6 Production is removed from machines in accordance with workplace procedures.
- 1.7 Documentation of production is completed in accordance with workplace procedures.
- 1.8 Machines are lubricated as directed in accordance with workplace procedures.
- 1.9 Yarn paths, eyelets, knitting heads, machines, and working environment are clean and free of contamination in accordance with workplace procedures.

### Element 2

Repair yarn-related faults at the knitting head and fabric press-offs.

#### Performance criteria

- 2.1 Incorrectly-positioned yarns are rethreaded in accordance with workplace procedures.

- 2.2 Broken yarns or new ends are joined in accordance with workplace procedures.
- 2.3 Fabric press-offs are fixed in accordance with machine-type and workplace procedures.
- 2.4 Machines are reset for restart in accordance with workplace procedures.  
Range after fault correction, style changes, pattern changes.

### **Element 3**

Operate process machines ancillary to the knitting production.

#### **Performance criteria**

- 3.1 Ancillary process machines are operated in accordance with machine-builder's instructions and workplace procedures.
- 3.2 Safety precautions that comply with workplace procedures are observed.
- 3.3 The working environment is kept clean and free of contamination.

### **Element 4**

Identify and sort wastes.

#### **Performance criteria**

- 4.1 Yarn wastes are identified by fibre content and sorted according to workplace procedures.
- 4.2 Fabric wastes are identified and sorted according to workplace procedures.

### **Element 5**

Demonstrate knowledge of yarn-related faults in knitted fabrics.

Range yarns used in the workplace, use of one or more ends of incorrect yarn in the complement of yarns on a knitting machine, two example of personally-experienced and collected yarn-related faults.

#### **Performance criteria**

- 5.1 Yarn-related faults in knitted fabric are described, shown by sample, and their correction and the effects of the faults on the knitted production are explained in accordance with workplace procedures.

Range faults arising from the use of yarns of incorrect batch or merge and/or yarn count and/or, in textured continuous-filament yarns, if applicable, the use of yarns of incorrect direction of twist, with the use of dyestuffs, if necessary, to highlight the fault.

### **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.

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### **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.