



Australian Government

Department of Education, Employment and Workplace Relations

LMTTX3021A Apply knowledge of weaving processes to production requirements

Revision Number: 1

LMTTX3021A Apply knowledge of weaving processes to production requirements

Modification History

Not applicable.

Unit Descriptor

Unit descriptor This unit covers the skills and knowledge required to match the weaving process to enterprise equipment and product and customer requirements. Loom set up and operation skills are covered in *LMTTX3022A Set up and operate weaving looms for production*.

Application of the Unit

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This unit applies to the application of weaving knowledge to weaving production processes for the setting up of machines for production changes in an enterprise. Discretion and judgement may be required, for both self and others, in planning and selecting processes, procedures or outcomes.

Work may be conducted in small to large scale enterprises and may involve individual and team activities. Work is performed within defined procedures under direct supervision.

The application of this unit is according to OHS practices of the enterprise and workplace practices, which may include:

- requirements prescribed by legislation, awards, agreements and conditions of employment
- standard operating procedures
- work instructions
- oral, written and visual communication
- quality practices, including responsibility for maintenance of own work quality and contribution to quality improvement of team or section output
- housekeeping
- tasks related to environmental protection, waste disposal, pollution control and recycling

This unit requires the application of skills associated with initiative and enterprise and planning and organising weaving processes for production. This unit also requires problem solving ability to develop, test, evaluate, assess and make modifications to process to meet specification requirements. Communication skills will be used to interpret specifications, determine and conduct samples, assess and discuss results.

Licensing/Regulatory Information

Not applicable.

Pre-Requisites

Prerequisites

Employability Skills Information

Employability Skills This unit contains employability skills.

Elements and Performance Criteria Pre-Content

Not applicable.

Elements and Performance Criteria

ELEMENT	PERFORMANCE CRITERIA
1 Obtain draft pattern and production specifications	1.1 Draft pattern and production details are obtained from relevant sections or employees 1.2 Timelines for production of sample and production run are established and agreed 1.3 Yarn stock levels are checked
2 Match pattern to yarn and loom specifications	2.1 Looms for production of specified product are selected in conjunction with weaving or production manager in accordance with OHS practices 2.2 Match yarn to documentation 2.3 Creeling or other yarn feed arrangements are specified 2.4 Cards or programs for looms are prepared or ordered
3 Determine sample requirements and procedure	3.1 Sample loom is used if available 3.2 Sample run length is determined in conjunction with designers and in accordance with loom operating requirements 3.3 Quality criteria for checking of sample run is determined
4 Determine requirements of other manufacturing sections and their implications for the weaving process	4.1 Production requirements of pre and post weaving departments are understood and incorporated into planning for weaving 4.2 Maintenance requirements and schedules for looms are checked
5 Produce and check sample	5.1 Sample is produced and checked and any necessary changes to pattern or production requirements are made 5.2 Weaving operators are briefed on production requirements and given special instructions if required

Required Skills and Knowledge

This describes the essential skills and knowledge and their level, required for this unit.

Demonstrates knowledge of:

- spinning methods
- yarn twist and application
- fibre types and their method of production
- fibre parameters
- yarn counts: Tex
- warping methods
- yarn conditioning
- fabric types
- design types
- Sett construction
- warp tying methods
- loom components
- weaving process and the various types of weaving
- factors affecting loom performance: yarn strength, sizing, ambient conditions
- setting up and adjustment requirements for the range of machines and equipment used in the enterprise
- machine manufacturer specifications
- OHS practices, including hazard identification and control measures
- quality practices
- workplace practices
- recording and reporting practices

Demonstrates skills to:

- set and operate machines
- operate primary mechanisms, eg shed forming, weft insertion, beat up, let off and take up
- test, analyse and prepare samples
- differentiate between constructions
- differentiate between types of weaves
- draw up a simple range of patterns
- read, interpret and follow information on work specifications, standard operating procedures and work instructions and other reference material
- maintain accurate records
- communicate within the workplace
- sequence operations
- meet specifications
- clarify and check task-related information
- carry out work according to OHS practices

Evidence Guide

The Evidence Guide provides advice on assessment and must be read in conjunction with the Performance Criteria, Required Skills and Knowledge, the Range Statement and the Assessment Guidelines for the Training Package.

Critical aspects of evidence to be considered	Demonstrates skills and knowledge to: • interpret production specifications accurately • set loom correctly • perform sample runs • arrange or conduct testing of sample • make appropriate re-adjustments • apply workplace health and safety policies in production operations • maintain accurate records
Consistency in performance	Consistently applies skills and knowledge when: • organising work • completing tasks • identifying improvements • using workplace practices • using OHS practices • recording and reporting accidents and incidents • assessing operational readiness of equipment used and work processes • recognising and adapting to cultural differences in the workplace, including modes of behaviour and interactions • completing work systematically with attention to detail without damage to goods and equipment
Resource implications	Access is required to real or appropriately simulated situations, including work areas, materials and equipment, and to information on workplace practices and OHS practices.
Context for assessment	Assessment may occur on the job or in an appropriately simulated environment.
Interdependent Assessment	This unit should be assessed with those units assessed in conjunction with <i>LMTTX3003B Set up and operate weaving looms for production</i> and <i>LMTTX3020A Identify and correct weaving process faults</i>

Range Statement

RANGE STATEMENT

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. Add any 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.

Legislative/regulatory requirements All work must comply with relevant Federal and State or Territory legislative or regulatory requirements.

Product specifications may include may include

- quality name
- pile height
- beat-up
- width
- weaving construction (pattern)

Looms may include

- weaving looms
- any ancillary machine typically used in the weaving sector concerned, eg loading and unloading equipment
- microprocessor or computer controlled looms
- both production and service equipment used in the enterprise
- broadloom
- narrowloom
- all shuttle types
- Jacquard looms

Products may include

- broadloom and narrowloom carpets
- apparel
- terry towelling
- furnishing and upholstery fabrics
- woven industrial products
- woven healthcare products

OHS practices OHS practices must include hazard identification and control, risk assessment and implementation of risk reduction measures specific to the tasks described by this unit, and may include:

- manual handling techniques
- standard operating procedures
- personal protective equipment
- safe materials handling
- taking of rest breaks
- ergonomic arrangement of workplaces
- following marked walkways
- safe storage of equipment
- housekeeping

- reporting accidents and incidents
- other OHS practices relevant to the job and enterprise

Unit Sector(s)

Sector Textile Production