

Overview

This unit covers the skills and knowledge you will need to carry out moulding operations that involves using a pattern or mould to change the shape of the material. This will include injection moulding, casting, laying up using resin and fibre materials,etc

This will involve carrying out the moulding operation according to defined operating procedures. You will be expected to monitor the moulding operation, ensuring that the moulded components are to the required specification. Meeting production targets will be an important issue and your production records must show consistent and satisfactory performance.

Your responsibilities will require you to comply with organisational policy and procedures for the moulding activities undertaken, and to report any problems with the moulding activities to the appropriate people. You will be expected to work to instructions, taking personal responsibility for your actions and the quality and accuracy of the work that you produce. You will also be expected to complete any necessary documentation.

Your underpinning knowledge will be sufficient to provide a sound basis for your work, and to adopt an informed approach to applying the required work instructions and moulding procedures. You will have an understanding of the moulding process used, and its application, and will know about the tools, equipment, materials and consumables in adequate depth to provide a sound background for carrying out the activities to the required specification.

You will understand the safety precautions required when working with the moulding tools and equipment. You will be required to demonstrate safe working practices throughout, and will understand the responsibility you owe to yourself and others in the workplace.

This unit on moulding products involves:

1. using the correct tools and equipment for the moulding operations
2. carrying out the moulding operation
3. monitoring the moulding operation
4. reporting problems to the appropriate person
5. completing any necessary documentation
6. working in ways which maintain the safety of yourself and others

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Carrying out moulding operations

Performance criteria

You must be able to:

- P1 work safely at all times, complying with health and safety, environmental and other relevant regulations and guidelines
- P2 ensure you have the correct job instructions and any relevant moulding procedure and quality specifications
- P3 use the correct moulding tools and equipment for the operations being carried out
- P4 apply appropriate release agents to the patterns or moulds when required
- P5 carry out the moulding operations according to instructions and safe operating procedures
- P6 monitor the moulding operation and identify any problems that occur
- P7 report any problems immediately to the appropriate person
- P8 produce moulded product/s which comply with the specification and quality requirements
- P9 work to achieve your production targets
- P10 deal appropriately with finished products and complete any necessary documentation

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Carrying out moulding operations

Knowledge and understanding

You need to know and understand:

- K1 what are the relevant health and safety requirements of the work area in which you are carrying out the moulding operations
- K2 what are the specific safe working practices, moulding procedures and environmental regulations that need to be observed
- K3 what are the hazards associated with carrying out the moulding operations
- K4 what actions need to be taken in case of emergencies
- K5 what personal protective equipment needs to be used during the moulding activities and where can it be obtained
- K6 how to make sure you have the necessary job instructions, moulding procedures and quality specifications that are used
- K7 what are the specific moulding operations to be performed
- K8 what tools and equipment are used for the moulding operations being carried out and how to check that they are in a safe and usable condition
- K9 how to prepare the patterns or moulds in readiness for the moulding activities and the use of mould release agents where applicable
- K10 how to carry out the moulding process to achieve the required specification
- K11 why its important to follow the specified moulding sequence and procedure at all times
- K12 what problems can occur with the moulding operation, how to identify them and who to report them to
- K13 why it is important to report problems immediately
- K14 how to monitor and check the quality of the moulding operations, against the quality standards required
- K15 what documentation may need to be completed
- K16 what your responsibilities are with regard to the reporting lines and procedures in your working area
- K17 who are the appropriate people and what are their responsibilities within your working area

Additional Information

Scope/range related to performance criteria

You must be able to:

1. Follow the relevant moulding procedures and safety requirements to include **all** of the following:
 - 1.1. health and safety regulations
 - 1.2. moulding equipment / tool operating instructions
 - 1.3. safe working practices
 - 1.4. company standards and procedures
 - 1.5. job instructions

2. Carry out moulding operations using **one** of the following methods:
 - 2.1. hand moulding operations
 - 2.2. manually controlled machine moulding operations
 - 2.3. fully automated machine moulding operations
 - 2.4. combined moulding operations

3. Carry out checks of the moulded products to include the following:
 - 3.1. completeness of moulding operations and **one** other check from the following:
 - 3.2. shape/profile of the moulded components
 - 3.3. freedom from deformity or damage
 - 3.4. freedom from contamination
 - 3.5. surface quality and appearance

4. Report problems to the appropriate person to include **one** of the following:
 - 4.1. supervisor
 - 4.2. team leader
 - 4.3. quality control

5. Work to achieve production targets for **both** of the following:
 - 5.1. output
 - 5.2. quality

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