Unit 285 Producing cement castings in the workplace

GL 80

Level: 2

Unit aim:

This unit aims to provide you with the necessary skills and knowledge to:

- interpret information
- comply with relevant legislation and official guidance
- maintain safe and healthy working practices
- select the required quantity and quality of resources
- minimise the risk of damage
- produce cement castings in a timely manner and with minimal waste.

*PER – Portfolio evidence reference SO – Site observation OQ – Oral question WQ – Written question WT – Witness testimony
PS – Product supplementary PD – Professional discussion

Assessment criteria that are practical activities are highlighted in bold.

1. Interpret the given information relating to the work and resources when producing cement castings.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
1.1 **interpret and extract information from:**							
a. **drawings**							
b. **specifications**							
c. **schedules**							
d. **method statements**							
e. **risk assessments**							
f. **manufacturers' information**							
1.2 **comply with information and/or instructions derived from risk assessments and method statements**							
1.4 describe the organisational procedures developed to report and rectify inappropriate information and unsuitable resources and how they are implemented							
1.5 describe different types of information, their source and how they are interpreted in relation to:							
a. drawings							
b. specifications							
c. schedules							
d. method statements							
e. risk assessments							
f. manufacturers' information							
g. current regulations governing buildings.							

2. Know how to comply with relevant legislation and official guidance when producing cement castings.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
2.1 describe your responsibilities regarding potential accidents, health hazards and the environment whilst working whilst working:							
a. in the workplace							
b. below ground level							
c. in confined spaces							
d. at height							
e. with tools and equipment							
f. with materials and substances							
g. with movement/storage of materials							
h. by manual handling and mechanical lifting							
2.2 describe the organisational security procedures for:							
a. tools							
b. equipment							
c. personal belongings in relation to:							
a. site							
b. workplace							
c. company							
d. operative							
2.3 explain what the accident reporting procedures are and who is responsible for making reports.							

3. Maintain safe and healthy working practices when producing cement castings.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
3.1 **use health and safety control equipment safely and comply with the methods of work to carry out the activity in accordance with current legislation and organisational requirements when producing cement castings**							
3.2 **demonstrate compliance with given information and relevant legislation when producing cement castings in relation to the following:**							
a. **safe use of access equipment/working platforms**							
b. **safe use, storage and handling of materials, tools and equipment**							
c. **specific risks to health**							
3.3 explain why and when health and safety control equipment, identified by the principles of prevention should be used, relating to producing cement castings, and the types, purpose and limitations of each type, the work situation and general work environment in relation to:							
a. collective protective measures							
b. personal protective equipment (PPE)							
c. respiratory protective equipment (RPE)							
d. local exhaust ventilation (LEV)							
3.4 describe how relevant health and safety control equipment should be used in accordance with given working instructions							
3.5 describe how emergencies should be responded to in accordance with organisational authorisation and personal skills when involved with:							
a. fires							
b. spillages							
c. injuries							
d. other task-related activities.							

4. Select the required quantity and quality of resources for the methods of work to produce cement castings.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
4.1 **select resources associated with own work in relation to:**							
a. **materials**							
b. **components**							
c. **fixings**							
d. **tools**							
e. **equipment**							
4.2 describe the:							
a. characteristics							
b. quality							
c. uses							
d. sustainability							
e. limitations							
f. defects associated with the resources in relation to:							
a. mould compounds, aggregates, cement, lime, casting plasters and specialised casting materials							
b. reinforcing material							
c. timber, zinc and fixings							
d. additives and release agent							
e. hot and cold pour							
f. clean water							
g. hand tools, portable power tools, vibrating table and ancillary equipment							

4.3 describe:							
a. how the resources should be used correctly							
b. how problems associated with the resources are reported							
4.4 explain why the organisational procedures have been developed and how they are used for the selection of required resources							
4.5 describe any potential hazards associated with the resources and method of work							
4.6 describe how to calculate:							
a. quantity							
b. length							
c. area							
d. wastage associated with the method/procedure to produce cement castings.							

5. Minimise the risk of damage to the work and surrounding area when producing cement castings.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
5.1 **protect the work and its surrounding area from damage in accordance with safe working practices and organisational procedures**							
5.2 **minimise damage and maintain a clean work space**							
5.3 **dispose of waste in accordance with current legislation**							
5.4 describe how to protect work from damage and the purpose of protection in relation to:							
a. general workplace activities							
b. other occupations							
c. adverse weather conditions							

5.5 explain why the disposal of waste should be carried out safely in accordance with:							
a. environmental responsibilities							
b. organisational procedures							
c. manufacturers' information							
d. statutory regulations							
e. official guidance.							

6. Complete the work within the allocated time when producing cement castings.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
6.1 **demonstrate completion of the work within the allocated time**							
6.2 describe the purpose of the work programme and explain why deadlines should be kept in relation to:							
a. types of progress charts, timetables and estimated times							
b. organisational procedures for reporting circumstances which will affect the work programme							

7. Comply with the given contract information to produce cement castings to the required specification.							
You must be able to:	*PER	SO	OQ	WQ	WT	PS	PD
7.1 **demonstrate the following work skills when producing cement castings:**							
a. **measuring**							
b. **marking out**							
c. **gauging**							
d. **mixing**							
e. **casting a running finish**							

7.2 **use and maintain hand tools, portable power tools, vibrating table and ancillary equipment**							
7.3 **construct models and running moulds**							
7.4 **prepare bench, install reinforcement and produce cement castings to given working instructions from the following:**							
a. **running straight and radial moulds**							
b. **flood moulds, case moulds and casts**							
7.5 describe how to apply safe and healthy work practices, follow procedures, report problems and establish the authority needed to rectify them, to:							
a. construct models and running moulds							
b. prepare bench							
c. install reinforcement							
d. produce running straight and radial moulds							
e. produce mouldings using flood, case moulds and casts							
f. prepare mould compounds, aggregates, cement, lime, casting plasters and specialised casting materials							
g. mix, place and compact material to make castings							
h. remove and cure castings							
i. produce plain faced rebated slabs							
j. recognise and determine when specialist skills and knowledge are required and report accordingly							
k. understand specific requirements for structures of special interest, traditional build (pre 1919) and historical significance							
l. use hand tools, portable power tools, vibrating table and ancillary equipment							
m. work at height							

7.6	describe the needs of other occupations and how to communicate effectively within a team when producing cement castings							
7.7	describe how to maintain the tools and equipment used when producing cement castings.							

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Declaration

I confirm that the evidence supplied for the above unit is authentic and a true representation of my own work. The work logged is my own work carried out during my normal work duties.

Candidate name:	
Candidate signature:	
Date:	

I confirm that this candidate has achieved all the requirements of this unit with the evidence listed. Assessment was conducted under the specified conditions and context, and is valid, authentic, reliable, current and sufficient.

Assessor name:	
Assessor signature:	
Date:	

IQA name:	
IQA signature:	
Date:	