



ASSESSMENT MATERIAL EVIDENCE GUIDE

Qualification

Biogas Plant
Supervisor Floating
Drum

CS Code:

Level: 3

Credit: 5

Version: 1

SELECTION OF SUITABLE TYPE AND APPROPRIATE SIZE OF BIO-DIGESTER

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ASSESSMENT AND ASSESSOR DETAILS

Competent ☐ Not Yet Competent ☐

Assessment ☐ Re-Assessment ☐

Assessor's Name _____ Assessor's Code _____

Assessor's Signature _____ Date _____

DD		MM		YYYY					

CANDIDATE DETAILS

Candidate's Name _____
First Name Last Name

Father's Name _____

Institute Name and District _____

CNIC/BFORM #

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Registration Number issued by Assessment Body _____

Gender Male ☐ Female ☐ Transgender ☐

Candidate's Consent I agree to the time and date of the assessment and am aware of the requirements of the assessment. I fully understand my rights of appeal.

Candidate's Signature _____

ASSESSMENT RESULTS SUMMARY FORM

You can use this coversheet as an *Assessment Results Summary Form*. Simply post a photocopy of this completed coversheet to NAVTTC

NAVTTC OFFICE ONLY

1. DATE FORM RECEIVED:

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 DD MM YYYY

2. DATE ENTERED INTO DATABASE:

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 DD MM YYYY

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ASSESSMENT SUMMARY & RECORD

ACTIVITY	METHOD				DESIRED OUTCOMES	RESULT	
NATURE OF ACTIVITY	WRITTEN	ORAL	PORTFOLIO	OBSERVATION	DESIRED OUTCOMES FOR SUCCESSFUL ASSESSMENT OF COMPETENCY STANDARD: SELECTION OF SUITABLE TYPE AND APPROPRIATE SIZE OF BIO-DIGESTER	COMPETENT	NOT YET COMPETENT
Practical Skill Demonstration				✓	Select suitable type and appropriate size of floating-drum bio-digester for biogas plant.		
Knowledge Assessment	✓	✓			Answer all questions your Assessor may have during the practical assessment.		
Other Requirements			✓		N/A		

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CANDIDATE ASSESSMENT

Candidate's Name..... Father's Name

ALL WORK ASSESSED IN THIS COMPETENCY STANDARD MUST BE YOUR OWN WORK.

GUIDANCE TO CANDIDATE

To meet this standard you are required to complete the following tasks within **one hour** timeframe:

- Select the size and design of floating drum bio-digester for biogas plant.
- Carry out calculations for materials required for installation of floating drum bio-digester for biogas plant.

Important Note: The following general performance criteria will be followed and performed in all the tasks (where applicable by the candidate in order to meet this standard:

- Follow precautionary procedures as per requirements of the given tasks
- Select, use and maintain equipment/ tools as per requirement of the task
- Report to supervisor in case of any emergency after taking necessary actions
- Complete the work by following sequence of the operations
- Perform task(s) within standard timeframe

ACTIVITIES	CANDIDATE RESPONSE
1. Complete practical task of selection of suitable type and appropriate size of bio-digester under observation by an assessor	During a practical assessment, under observation by an assessor, I will correctly : • Select the size and design for floating drum bio-digester for biogas plant ✓ Select the size of floating type bio-digester for biogas plant to fulfil the requirements of 10 persons of the family ✓ Select the size of floating type bio-digester for biogas plant when there are 10 cattle for feeding purpose ✓ Select the design of floating drum bio-digester according to the locality of biogas plant • Carry out calculations for materials required for installation of floating drum bio-digester for biogas plant ✓ Calculate the quantity of feeding material (cattle dung) from 10 cattle for biogas plant ✓ Quantify the quantity of gas produced from feeding materials of 10 cattle for biogas plant ✓ Calculate the quantity of gas required for a family with 10 family members ✓ Calculate the quantity of gas required by the family on the basis of end-use applications of the gas ✓ Estimate the quantity of other materials (other than cattle dung) for installation of floating drum bio-digester for biogas plant ✓ Calculate the cost for installation of floating drum bio-digester depending upon the material required (other than cattle dung) ✓ Calculate the HRT for floating drum digester of biogas plant with 100 cubic feet volume of the digester and 2 cubic feet input • General Performance Criteria ✓ Follow precautionary procedures as per requirements of the given tasks ✓ Select, use and maintain equipment/ tools as per requirement of the task ✓ Report to supervisor in case of any emergency after taking necessary actions ✓ Complete the work by following sequence of the operations ✓ Perform task(s) within standard timeframe
2. Other requirements	• N/A
3. Answer any questions your assessor may have during the practical assessment	My answers to questions are correct and demonstrate my understanding of the topics and their application.

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ASSESSOR JUDGEMENT GUIDE

Candidate's Name Father's Name.....

INSTRUCTIONS FOR ASSESSOR

This section contains minimum evidence requirements. Oral questioning may be used to clarify candidate understanding of the topic and its application.

ACTIVITIES	MINIMUM EVIDENCE REQUIRED	YES	NO	ASSESSOR COMMENTS
1. Complete practical task of selection of suitable type and appropriate size of bio-digester under observation by an assessor	During a practical assessment, under observation by an assessor, the candidate correctly carried out the following tasks:			
Select the size and design for floating drum bio-digester for biogas plant	Selected the size of floating type bio-digester for biogas plant to fulfil the requirements of 10 persons of the family			
	Selected the size of floating type bio-digester for biogas plant when there were 10 cattle for feeding purpose			
	Selected the design of floating drum bio-digester according to the locality of biogas plant			
Carry out calculations for materials required for installation of floating drum bio-digester for biogas plant	Calculated the quantity of feeding material (cattle dung) from 10 cattle for biogas plant			
	Quantified the quantity of gas produced from feeding materials of 10 cattle for biogas plant			
	Calculated the quantity of gas required for a family with 10 family members			
	Calculated the quantity of gas required by the family on the basis of end-use applications of the gas			
	Estimated the quantity of other materials (other than cattle dung) for installation of floating drum bio-digester for biogas plant			
	Calculated the cast for installation of floating drum bio-digester depending upon the material required (other than cattle dung)			
	Calculated the HRT for floating drum digester of biogas plant with 100 cubic feet volume of the digester and 2 cubic feet input			
General Performance Criteria	Followed precautionary procedures as per requirements of the given tasks			
	Selected, used and maintained equipment/ tools as per requirement of the task			
	Reported to supervisor in case of any emergency after taking necessary actions			
	Completed the work by following sequence of the operations			
	Performed task(s) within standard timeframe			
2. Other requirements	N/A			

3. Answer any questions the assessor may have during the practical assessment	Candidate's answers to questions are correct and demonstrate understanding of the topics and their application. Assessor to document below all questions asked and candidate answers. Use extra sheets if required and attach.			
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LIST OF TOOLS, EQUIPMENT, MATERIAL AND CONTEXT OF ASSESSMENT

INSTRUCTIONS	This section contains information regarding; - Context of the assessment - List of required tools and equipment. - List of consumable items required during the service
1. Context of Assessment	This task will be performed in real time environment.

2. List of tools and equipment required (for five candidates)		
S. No	Items	Quantity
1	Personal protective equipment (PPE)	05
2	Calculator	05

3. List of consumable items required (for five candidates)		
S. No	Items	Quantity
1	Plastic Gloves (Pairs)	05
2	Scale	05
3	Measuring Tape	05
4	Note Books	05
5	Pencils, Rubber, sharpener	05
6	Drafting Chart	05