

Syllabus For Zigzag Brick Kiln Fire Technician (RPL)

Course Name	Zigzag Brick Kiln Fire Technician (RPL)
Sector	CONSTRUCTION
Course Code	CON/2024/ZKFT/300
Level	4 (RPL)
Occupation	Zigzag Brick Kiln Fire Technician
Course Duration	Total Duration 12 Hrs (OJT)
Trainees' Entry Qualification	Class V Pass with 5 years experience in the relevant field
Trainers Qualification	BE/ B.Tech in Civil / Construction Engineering with 2 Yrs Experience in related field OR Diploma in Civil Engineering with 3 Yrs experience in related filed. OR ITI in Mason Trade Or Graduate with Level 4 Certificate in related Trade with 4 Yrs experience in Training.

Structure of Course:

Module No.	Module name	Total (Hrs)
1	Basic of Zigzag kilns& Introduction to Air Pollution	1
2	Fuel properties and preparation	1
3	Good fuel feeding practice	8
4	Health and Safety	1
5	Familiarization with Assessment Process and Terms	1
	TOTAL	12

SYLLABUS:

S. No.	Topic/Module	Duration (in Hours)	Key Learning Outcomes
1	Basic of Zigzag kilns& Introduction to Air Pollution	1	<p>The brick kiln fire technician will be able to</p> <ul style="list-style-type: none"> – Understand the components of the zigzag kilns and the impact of poor coal feeding practices on zigzag kiln performance and air pollution <ul style="list-style-type: none"> ○ shape of kilns, ○ flue duct systems, ○ method for draught creation, ○ Understand the air flow system in zigzag brick kilns ○ Method of measuring kiln performance – quality of fired bricks, specific fuel consumption ○ Poor coal feeding practices- single person feeding, air leakage, etc, and their impact on kiln performance – Air pollution and its relationship with kiln performance

S. No.	Topic/Module	Duration (in Hours)	Key Learning Outcomes
2	Fuel properties and preparation	1	The brick kiln fire technician will be able to <ul style="list-style-type: none"> – Understand basic properties of commonly used fuels and their utility for brick kilns – Prepare right fuel mix from the available fuel options – Follow the best practices for fuel preparation
3	Good fuel feeding practice	08	The brick kiln fire technician will be able to learn: <p>Best practices for fuel feeding</p> <ul style="list-style-type: none"> – Single person fuel feeding practice in the kiln <p>Best practices for air flow and draught management</p> <ul style="list-style-type: none"> – Best practices for draught management and maintaining the fire travel in the kiln – Control of air leakages in the kiln – Problems caused due to faults during brick loading <p>Measurement of kiln parameters and quality control</p> <ul style="list-style-type: none"> – Measurement and log-keeping of <ul style="list-style-type: none"> ○ Use of thermocouple to measure temperatures of bricks in firing zone ○ Temperature of exiting flue gases ○ Daily fire travel distance – Correlate the quality of fired bricks with the temperature records and take measures to improve the quality. – Do quality control – Do troubleshooting
4	Health and Safety	1	The brick fire technician will be able to learn <ul style="list-style-type: none"> – The safety Do's and Don'ts, particularly while fuel feeding in firing region and operating fans and motors. – Understand impact of working in high temperature environment on health and necessary precautions to be taken. – Practice of using personal protective equipment – Use of First-aids
5	Familiarization with Assessment Process and Terms	1	The brick kiln fire technician will <ul style="list-style-type: none"> – Understand the assessment process and outcomes – Develop familiarity with the assessment schedule

Total No of Hours – 12

List of protective equipment:

1. Mask
2. Goggle
s
3. Helmet
4. Hearing protective device
5. Harnesses
6. Gloves
7. Protective
footwear
8. Protective
clothing
9. First-aid