



## CURRICULAR OUTLINE GRINDING & ABRASIVE WHEEL

### Module One: Introduction

**Time Allocation: 15 Minutes**

#### Module terminal objectives: -

Upon completion of the module, the participants should be able to:

- Understand the course outline (knowledge)
- Understand the aims and objectives (knowledge)
- Practice safety procedure (skill)

#### Module Enabling Objective(s):

Upon completion of the module, the participants should be able to:

- The module enable the participant to understand profile and able to practice safety procedure at the training centre. The delegate is required to pass modular assessment (knowledge) with a scope mark of 80%.

#### Delivery Methods:

- Lecture Format

#### Topics:

1. ESTC profile
2. ESTC safety procedure
3. The Do's and Don'ts



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### Module Two: Safety Culture

**Time Allocation: 45 Minutes**

#### Module terminal objectives: -

Upon completion of the module, the participants should be able to:

- Why safety culture (knowledge)
- Explain the importance of Safety Culture at worksite (knowledge)
- Identify causes of accident in grinding (knowledge)

#### Module Enabling Objective(s):

Upon completion of the module, the participants should be able to:

- Understand the importance of safety culture by successfully passing modular knowledge assessment with a score of 80%.

#### Delivery Methods:

- Lecture Format

#### Topics:

1. What is safety culture?
2. Why safety culture?
3. Causes of accident in grinding



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### Module Three: Legal Requirement

**Time Allocation: 30 Minutes**

#### Module terminal objectives: -

Upon completion of the module, the participants should be able to:

- List out the OSH act (knowledge)
- Explain the Factory and Machinery ACT (knowledge)
- Explain the Health and Safety of Work Act (HASAWA) (knowledge)
- Explain the Provision of use of Work Equipment Regulations (PUWER) (knowledge)
- Explain the OSHA 29 CFR 1910.215 (US) (knowledge)

#### Module Enabling Objective(s):

Upon completion of the module, the participants should be able to:

- Understand the national/international legal requirement by successfully passing modular knowledge assessment with a score of 80%.

#### Delivery Methods:

- Lecture Format

#### Topics:

1. OSHA
2. FMA
3. PUWER
4. HASAWA
5. MHSWR
6. OSHA CFR 219 1910.215



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### Module Four: General Safety

**Time Allocation: 75 Minutes**

#### Module terminal objectives: -

Upon completion of the module, the participants should be able to:

- Understand why accident happen (knowledge)
- Identify the hazards in grinding (knowledge)
- Mitigate the risk involved in grinding works (knowledge)
- Identify causes of accident (knowledge)
- Explain the causes of wheel breakage (knowledge)  
determine when to replace the disc/wheel (knowledge)
- Demonstrate correct handling of wheels (knowledge)
- Pre use checks (knowledge)
- Selection of wheel (knowledge)
- Good storage practices (knowledge)
- Explain the correct install of machine guard (knowledge)

#### Module Enabling Objective(s):

Upon completion of the module, the participants should be able to:

- Explain the safe and correct wheel by successfully passing modular knowledge assessment with a score of 80%

#### Delivery Methods:

- Lecture Format

#### Topics:

1. General safety
2. Job safety analysis
3. Grinding hazards
4. Wheel breakage and worn out
5. Good storage



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6. Handling of wheel
7. Material safety data sheet
8. Machine guarding

### Module Five: Control of hazardous energies

**Time Allocation: 60 Minutes**

#### Module terminal objectives: -

Upon completion of the module, the participants should be able to:

- Identify the control of hazardous energy (skill)
- Explain the log out and tag out (knowledge)
- Explain the hot work procedures (knowledge)

#### Module Enabling Objective(s):

Upon completion of the module, the participants should be able to:

- Identify and mitigate the hazardous energy by successfully passing modular knowledge assessment with a score of 80%

#### Delivery Methods:

- Lecture Format

#### Topics:

1. Control of hazardous energy
2. Log out tag out (LOTO)
3. Hot work procedures



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### Module Six: Practical exercises and assessment

**Time Allocation: 150 Minutes**

#### Module terminal objectives: -

Upon completion of the module, the participants should be able to:

- Explain pre use and functional check (skill)
- Demonstrate the proper preparation for installation of wheel (skill)
- Demonstrate correct techniques of removing and install of the wheel (skill)
- Demonstrate general safety during grinding works (skill)
- Demonstrate good housekeeping (skill)

#### Module Enabling Objective(s):

Upon completion of the module, the participants should be able to:

- Demonstrate safe grinding work y successfully demonstrating the safe use of portable and mounted grinder as per assessment checklist

#### Delivery Methods:

- Practical exercises

#### Topics:

1. Select the correct wheel for the job
2. Use PPE correctly
3. Identify hazards
4. Apply safety procedure during grinding
5. Perform pre-check procedures prior starting the job
6. Perform housekeeping properly