

Angle Grinder

Safe Work Procedure

[Company]
[Company Address]
[Company E-mail]
[Company Phone]

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1. Introduction

An angle grinder is a working equipment used for various metal fabrication work activities. It is a powered tool used for cutting, grinding, deburring, finishing, and polishing. The most common types of the angle grinders are the powered either by cord, or battery.

The blade used for the work activity entirely depends on the job you are going to execute and material being used to work on. This tool with correct disc onboard can perform the job very easily, rapidly, and replaces numerous tools.

2. Work Descriptions and Associated Hazards

An angle grinder is used for various types of jobs in daily life, but with its use, a lot of hazards and associated risks are also present. The below list provides a summary of these elements;

S/#	Work Activity	Hazards	Risks
1	Metal Cutting	- Contact with rotating blade - Wheel breakage - Naked flames - Molten metal - Flying objects/ metal chips	- Contact with rotating parts can deliver cuts to body, the clothing can be entangled. - The wheel can break and hit the worker using it or someone who is present nearby. - Naked flames are produced when metal is being cut. The flames can ignite any ignitable material stored nearby. - The molten metal also causes a lot of problems during cutting. - During cutting process, metal chips can be produced, and they fly and anyone who is near can face them.
2	Grinding	- Naked flames - Wheel breakage - Faulty equipment usage	- Naked flames can ignite fire. - The broken wheel or flying wheel chips can enter eye, damage anyone, and deliver injuries. - Usage of faulty equipment can deliver fire or explosion.
3	Dust & Fumes	- Inhalation of dust and fumes	- Lung disorientation due to inhalation of dust and fumes produced during metal grinding, cutting.
4	Noise	- Hearing problem	- Hearing ability loss due to high noise. The operator and the people

			nearby can suffer hearing loss problems.
5	Faulty Equipment	- Fire - Explosion - Electrocution	- Use of faulty equipment can deliver fire, explosion, as well as electrocution to the operator or anyone who touches it accidently. - Equipment with damaged, worn off, cable can give electric shock.

3. Standard Operating Procedure

3.1. General Requirements

- The equipment should be in good condition, operatable, and ready to use.
- Operator's manual should be should be available. If operator's other language is other than English the instructions should be provided in translated language.
- The controls should be labelled and readable easily.
- The equipment should be inspected before use and should be used by a competent person.
- The equipment should be used for intended purpose only. For cutting, grinding, relevant disc should be used.
- The angle grinder should be provided with Guard Cover and forward hand grip for firm grip during use.
- The start button should be in working condition.
- PPEs should be worn before use.
- Modification in the equipment by worker or employer than can put the life under threat is prohibited by law.

3.2. Pre-Operation Task

- Competent person should be selected for the work activity.
- Drawings, clear instruction, information should be available for work activity.
- Appropriate grinder disc is accurately in place and tightened to the required torque.
- The work piece that is going under work is accurately placed on table and clamped.
- The work area is even, neat and clean, free of flammable and explosive materials.
- The guard is in place, ON/OFF button is working properly.
- Firefighting equipment is available within 30ft distance of the work activity.

3.3. Operation Task

- Ensure the hands are clear of the workpiece and away from the disc.
- Turn of the grinder from power source, remove the plug and secure before changing the disc.
- Ensure guard is intact when disc has been changed and tightened to required torque.

3.4. Post-Operation Task

- After job has been done, remove the power plug & secure to keep it safe from misuse or accidental start.
- Disconnect the equipment before cleaning, adjustment etc.
- Secure the equipment on safe location.

4. Annexures

1. Grinder Inspection Checklist
2. Grinder Risk Assessment