

Safe Use of Grinders

Document Number – OHS-PROC-131

This document applies to the following site(s):

All Sites	<input type="checkbox"/>				
Rockhampton Office	<input type="checkbox"/>	Brisbane Office	<input type="checkbox"/>	Tarong Site	<input checked="" type="checkbox"/>
Barron Gorge Hydro PS	<input checked="" type="checkbox"/>	Kareeya Hydro PS	<input checked="" type="checkbox"/>	Mica Creek PS	<input checked="" type="checkbox"/>
Koombooloomba Hydro PS	<input checked="" type="checkbox"/>	Swanbank PS	<input checked="" type="checkbox"/>	Mackay Gas Turbine	<input checked="" type="checkbox"/>
Wivenhoe Small Hydro PS	<input checked="" type="checkbox"/>	Stanwell PS	<input checked="" type="checkbox"/>	Meandu Mine	<input type="checkbox"/>

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1.0 Purpose/Scope

The purpose of this Business Procedure is to define Stanwell's minimum mandatory requirements for the management of hand held electric and battery grinders, and pedestal/ bench grinders.

This Business Procedure applies to all personnel who use hand held electric and battery grinders, and pedestal/bench grinders throughout Stanwell, all its sites and all activities under Stanwell's control. It applies to all Stanwell employees and contractors, including visitors to Stanwell workplaces.

This Business Procedure does not apply to die grinders and pneumatic grinders.

2.0 Actions

Only angle grinders which meet the following specification shall be used on Stanwell sites.

- Angle grinders shall be designed in accordance with AS/NZS 60745.2.3 - Hand-held Motor-operated Electric Tools - Safety - Particular requirements for grinders, polishers and disk-type sanders.
- All angle grinders must have a dead man switch.
- All angle grinders 7 inch and above must have a dead man switch, torque limitation clutch and a soft start.

2.1 Safe Systems of Work Requirements

Where eliminating the need to perform grinding is not practicable, techniques that minimise the potential for harm should be used, for example, where a safer alternative cutting tool is available or can be obtained an angle grinder should not be used as a cutting tool.

Alternative cutting tools may include the use of power bandsaws, drop type abrasive power saws, hand held reciprocating saws, clam shell cutters, mechanical shears, specialised cutters designed for cutting sheet metal (e.g. nibblers, shears), oxy acetylene equipment, plasma cutters etc.

2.2 Hot Work Authorisation

All grinding or cutting work performed outside of a workshop or designated hot work area must be carried out under the guidance of applicable site hot work authorisations.

2.3 Safe Use of Grinders

- All grinders must be inspected prior to use and all accessories must be compatible with the rated capacity and design of the tool.
- All electrical leads are to be inspected prior to use and tagged and removed "Out-of-Service" if damage is present.
- Always confirm before using electrical equipment that a test tag is attached and has a valid test date.
- All electrical leads are to be positioned so not to create a hazard i.e. tripping hazard.
- Grinders must be isolated when replacing disc/wheel, attachments and while inspecting the device.
- Where practicable, work should be positioned in the operator's most ergonomically sound work zone – generally this is between shoulder and knee height.
- Other workers in the vicinity must be protected from the potential of flying fragments or sparks.
- The rated speed of the disc/ wheel must be at least equal to the maximum speed marked on the tool.

- Use only disc/ wheel types that are recommended for the grinder and the specific guard designed for the selected wheel.
- Discs/wheels should be stored in a dry place.
- Discs used must be within the expiry date.
- Any defects are to be repaired by an authorised and competent person.

2.4 Angle Grinders

- Use grinding wheels as per the manufacturer's instructions. Cutting wheels/ discs must not be used for grinding jobs, and grinding wheels must not be used for cutting jobs.
- The arbour (centre) size of discs, flanges, backing pads or any other accessory must fit the spindle of the tool. Accessories with arbour holes that do not match the mounting hardware of the power tool will run out of balance, vibrate excessively and may cause loss of control.
- All guards are to be in place and secured prior to use.
- Handles shall not be removed from grinders unless risk assessed as safe to do so, and only for the minimum required time.
- If the use of a 7 inch or larger portable angle grinder is deemed necessary for cutting, and there is no practical alternative, the Large Angle Grinder for Cutting Approval Form T-1559 must be completed. Note this approval is not required when it is deemed necessary to use a 7 inch or larger portable angle grinder for grinding activities.
- The job piece should be securely fastened whilst being ground or cut and not held by hand.

2.5 Bench/Pedestal Grinders

- Do not use non ferrous metals on aluminium oxide wheels as this can cause the wheel to explode.
- Keep wheels dressed; maintain a square working face with approximately 1.5mm of clearance to the tool rest.
- Grind on the face of the wheel only, do not side load the wheels.
- If a wire brush wheel or other attachment is used, the tool rest and guarding are to be fitted and positioned in accordance with the manufacturers' specifications.
- Bench/pedestal grinders are to be securely attached to a stable base.
- Emergency stops must be tested before use.

3.0 Personal Protective Equipment (PPE)

- Double eye protection is mandatory when using a grinder unless full face protection is used and it is sealed to the users face.
- Face shields or full face protection must have an impact resistance rating of 'high' as per AS/NZS 1337.1:2010 Personal Eye Protection – Eye and face protectors for occupational applications.
- Hearing protection must be worn.
- Gloves must be worn when using hand held angle grinders. Ensure that gloves are well fitting to allow a good grip of the tool.
- Gloves are not recommended for use with bench grinders (e.g. wire or cloth buffing), unless a risk assessment determines that gloves are necessary.
- Where there is a risk of exposure to harmful airborne contaminants, appropriate respiratory protection must be worn.

- Consideration should be made on whether a leather hood, leg protectors, and workshop apron / jackets need to be worn for the task.
- A leather apron or similar is to be worn while using a wire buffing wheel to protect the operator from wire projectiles.
- Do not wear loose items of clothing or loose jewellery and ensure hair cannot become entangled when performing grinding operations.

4.0 Training and Competence Requirements

Any worker who operates a grinder must have obtained competency to operate via the achievement of a trade qualification, Verification of Competency (VOC), awareness training or appropriate skills and experience obtained on the job.

5.0 Review, Consultation and Communication

Review:

This Document is required to be reviewed, as a minimum, every 5 year/s

Consultation:

Required personnel from all sites have been consulted as part of the Health and Safety document consolidation.

Communication/Requirements after Update:

This document will be communicated through the site Health and Safety committee to their respective site personnel, contractors and management teams.

6.0 References

Source	Reference
Legislation	<ul style="list-style-type: none"> • Work Health and Safety Act 2011 and Regulation 2011
Australian Standards	<ul style="list-style-type: none"> • AS/NZS 60745.2.3:2011 - Hand-held Motor-operated Electric Tools - Safety - Particular requirements for grinders, polishers and disk-type sanders. • AS/NZS 1337.1:2010 Personal Eye Protection – Eye and face protectors for occupational applications.
Stay Safe	<ul style="list-style-type: none"> • Safe Use of Grinders OHS-PROC-131A
Tools	<ul style="list-style-type: none"> • T-1559 Large Angle Grinder for Cutting Approval Form
	<ul style="list-style-type: none"> • Safe Use of Grinders Awareness PPT

7.0 Definitions

N/A

8.0 Revision History

Rev. No.	Rev. Date	Revision Description	Author	Endorse/Check	Approved By
0	25.08.2015	Procedure created to consolidate legacy related documents	Jan Fullard	Michael Joy / Trevor Hooper	Ian Gilbar
1	22.12.2016	Review and update of document undertaken.	Jan Fullard	Michael Joy	Ian Gilbar

9.0 Appendices

Appendix A: Safe Use of Grinders Document Flowchart

