

Hazard Analysis and Risk Control Record										
Doc ref:			Task/Process Assessed:		Grinding					
Revision:			Location:							
Date:			Assessment Team:							
Operation:	Grinding		Approved by:							
Activity Steps	HAZARD		INITIAL RISK			CONTROL MEASURES		RESIDUAL RISK		
	Hazard Description and Worst Case Consequences with no Prevention or Mitigation Measures in Place	Loss Category/ Population Affected	L i k e l i h o o d	S e v e r i t y	R i s k L e v e l	List all Current and Planned Control Measures, taking into Account all Contributing and Escalating Factors		L i k e l i h o o d	S e v e r i t y	R i s k L e v e l
						Current and Planned Prevention Measures to reduce Likelihood	Current and Planned Mitigation Measures to reduce Severity			

Grinding using the electrical grinder	Injuries to workers -slip -trip -electrical shock -eyes injuries due to flying fragments	Asset Personnel	P o s s i b l e (3 )	S e r i o u s (-2)	U n d e s i r a b l e (-6)	<ul style="list-style-type: none"> <li>• Pre check and ensure that the grinding station is free of oil &amp; water spill and obstruction</li> <li>• Pre check grinding machine and its accessories for signs of pinch points and hidden traps prior to use</li> <li>• Ensure the grinding pressure hose connection is firmly attached to the grinding unit prior to using them</li> <li>• Pre check &amp; ensure the grinding machine &amp; its accessories electrical cord and connection for signs of exposed, loose or crushed wiring prior to use</li> <li>• Never attempt to position the fan blowing directly to operator face</li> <li>• Only trained &amp; qualified operator can perform the grinding work</li> <li>• Trained operator on the correct procedure to guard &amp; start up processes</li> <li>• Check and ensure the ventilation system is in good working condition</li> <li>• Pre check and ensure guards are implaced and grinding units such as tail stock and steady rest are locked down prior to use</li> <li>• Grinding wheel shall be hold up by the inside of the wheel and tap around the inside of the wheel while listening for a ringing sound</li> <li>• Stop all grinding activity when a thud or dull sound is heard</li> <li>• Jewlery, loose clothing and long unkept hair are prohibited for operators performing the grinding activity</li> </ul>	1. Ist aid kit readily available & accessible on site 2. Mandatory PPE such as hard helmet, face shield , safety shoes ,leather gloves Face mask & ear plug 3 Fire extinguisher readily available & accessible on site 4. Workers familiar with the emergency escape routes	-2	-2	Acce ptabl e (-4)
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Grinding using the electrical grinder	Injuries to workers -slip -trip -electrical shock -eyes injuries due to flying fragments	Asset Personnel	P o s i b l e (3)	S e r i o u s (-2)	U n d e s i r a b l e (-6)	<ul style="list-style-type: none"> <li>• Pre check and ensure that the grinding machine is setup in the correct position prior to use</li> <li>• Never attempt to change tooling insert when the machine is working</li> <li>• Never attempt to handle shavings with bare hands</li> <li>• Nothing should be placed near the grinding station in a manner obstructing the grinding machine controls &amp; activity</li> <li>• Never attempt to carry load of 40 pounds alone.</li> <li>• Get assistance as and when required when manual lifting loads</li> <li>• Safety signage displayed at site to warn operator to use only dry leather gloves when performing grinding activity</li> <li>• Operator to adopt SIPP technique during the grinding process and ensure he work in his green zone and line of strength</li> <li>• Designated location to store the electrical grinder after use with prominent safety signage indicating hot surface</li> <li>• Mandatory workshop safety level 1 &amp; electrical level 1 training for all operators</li> <li>• Operators trained on the use of fire extinguisher</li> <li>• Unauthorised personnel are barred from entering the grinding station</li> <li>• Pre check the grinding stone for signs of surfacing</li> <li>• Trained operator on the correct technique to resurface the grinding stone</li> <li>• Only trained operator can perform the grinding stone resurfacing</li> <li>• Readjust the tool rest position to 1/8 inch or closer to the grinding surface after the stone has been resurfaced</li> <li>• Never attempt to resurface the side of a grinding stone</li> <li>• Use only approved wheel –surfacing tool &amp; grind only the working edge</li> <li>• All cracked or broken shield or disc must be replaced</li> <li>• Ensure the gap between the work rest &amp; grinding stone does not exceed the 1/8 inch</li> <li>• Check &amp; ensure that the grinding stone is RPM rated prior to use</li> </ul>	1. Ist aid kit readily available & accessible on site 2. Mandatory PPE such as hard helmet, face shield , safety shoes ,leather gloves Face mask & ear plug 3 Fire extinguisher readily available & accessible on site 4. Workers familiar with the emergency escape routes	-2	-2	Acce ptabl e (-4)
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Grinding using the electrical grinder	Injuries to workers -slip -trip -electrical shock -eyes injuries due to flying fragments -burns to fingers	Asset Personnel	P o s i b l e (3 )	S e r i o u s (-2)	U n d e s i r a b l e (-6)	<ul style="list-style-type: none"> <li>• Ring test new stone by suspending stone on handle of screw driver &amp; tap it gently with a small wrench</li> <li>• Get supervisor to verified the new stone if a light ringing sound is not heard</li> <li>• Stop all grinding work if a strong vibration is generated</li> <li>• Never attempt to slow down the grinding wheel by forcing material into the grinding stone or by hard brushing</li> <li>• Take extra precaution when grinding soft material by looking out for material buildup</li> <li>• Use vise grips to hold the grinded parts and cooled them using compressed air</li> <li>• Never attempt to grind the at the side of the stone . Grind at the working edge</li> <li>• Always grasp the grinder firmly with 2 hands using the handle and direct the sparks generated away from grinder</li> <li>• Be wary of the operator in the work station when performing the grinding work</li> <li>• Always set the grinder in downward position after the disc has stopped rotating</li> <li>• Do not rest the disc on the floor or bench</li> <li>• Always unplug the grinder after using</li> </ul>	1. Ist aid kit readily available & accessible on site 2. Mandatory PPE such as hard helmet, face shield , safety shoes ,leather gloves Face mask & ear plug 3 Fire extinguisher readily available & accessible on site 4. Workers familiar with the emergency escape routes	-2	-2	Acce ptabl e (-4)
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