

JENELIYA ENGINEERING

Industrial Multi Services Provider

Service Type : All Type Fabrication Mfg. Civil/Fab Maintanance, Man Power Supplier, Transports, etc

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Ref. :

Date. :

HAZARD IDENTIFICATION AND RISK ASSESSMENT (HIRA) -DEVELOPMENT OF RISK CONTROL MEASURES								
S.No.	ACTIVITY	HAZARD	CONSEQUENCE	PROBABILITY FACTOR	SEVERITY	RISK LEVEL	RISK RATING	CONTROL MEASURES
ACTIVITY - 15: HANDLING OF PORTABLE ELECTRICAL TOOLS								
1	Working with portable electrical tools.	1. Damaged cable. 2. Defective tool. 3. loose components (wheel, switch) 4. Excess pressure on tool. 5. Improper handling. 6. Non use of PPEs.	1. Electric shock. 2. Spark/shock. 3.Hit injury. 4. Accident and injury. 5. Bodily injury. 6. Shock/eye and bodily injuries.	3	4	MODERATE	3	1. Daily check up before start. 2. Replace defective tools. 3. Proper maintenance. 4. Training on proper use and care. 5. Inspection and corrective action to follow correct handling procedures. 6. Use adequate PPE (Face shield/goggles, gloves).
ACTIVITY - 16: HANDLING PORTABLE HAND TOOLS								
1	Working with portable hand tools.	1. Defective/damaged tools and tools without protective handles. 2. Improper handling. 3. Improper storage. 4. Isuse/abuse.	1. Accident and bodily injuries. 2. Property damages.	4	3	MODERATE	3	1. Replacing defective/damaged tools. 2. use tools only wit protective handles. 3. Training and instruction to use right tool for the right job. 4. Keep tools only in toolboxes. 5. Trining and instruction to use right tools for the right job.
ACTIVITY - 17: ARC WELDING								
1	ARC WELDING	1. Radiation harmful to skin eyes. 2. Spatters/slag. 3. Hot flames. 4. Inhalation of toxic fumes. 5. Inhalation of dust particles. 6. Inhalation of welding fumes. 7. Inhalation of toxic gases. 8. Poor ventilation.	1. Welder's cataract. 2. Burn injury. 3. Lung ailments. 4. Dermatitis. 5. Hit injury / crush injury. 6. Electric shock. 7. Fire/Explosion. 8. Asphyxiation	2	5	HIGH	4	1. Use welding shield/goggles. 2. Fire proof apron/gloves/cover. 3. Ventilation (fan or exhaust) if possible. 4. Full-sleeved protective gloves. 5. proper clamping technique for welding technique. 6. Use shock proof boots and safety shoes. 7. provide earthing for welding cable. 8. Periodical gas test for gas. 9. Keep fire extinguisher ready. 10. Adequate ventilation. 11. training and instructions.





ACTIVITY - 13: GRINDING

1 Grinding and grinding wheel replacing	<ol style="list-style-type: none"> 1. Grinding without goggles. 2. Absence of tool rest on bench grinder. 3. More gap between the wheel and tool rest of bench 4. Improper/wrong size grinder wheel. 5. Excess pressure on wheel. 6. Breakage of wheel. 	<ol style="list-style-type: none"> 1. Injury to eyes by flying 2. Accident and injury. 	3	4	MODERAT E	3	<ol style="list-style-type: none"> 1. Use proper PPE. 2. Mount the tool rest on both side. 3. Replace the wheel. 4. Gap more than 1mm is unsafe. 5. Use grinding wheel of correct size. 6. Training and instruction. 7. Provide the extinguisher. 8. Use the blanket to cover nearby vents, drains, open 9. Application of mud plug prior to pipe after cold cutti 10. Proper tightening of wheel. 11. Use of corct size spacer washers.
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ACTIVITY - 25 : HANDLING OF GAS CYLINDERS

	1	2	5	HIGH	4	
Transporting gas cylinders : • Oxygen • Acetelene • Argon • Nitrogen • LPG	1. Cylinders kept horizontal. 2. Cylinder kept untied/unlocked in welding truck/mobile weldline unit. 3. Valve leakage.	1. Fire and explosion by leakage and property damage. 2. Gas leakage due to valve damage. 3. Human injury by fall of cylinder. 4. Damage to cylinder/valve. 5. Leakage of gas.				1. Keep charged cylinder only. 2. Keep vertically and tie with chain to a fixed structure. 3. Keep in specially fabricated cage to prevent fall. 4. Keep valve cap in position during transportation. 5. Different types of gas cylinders not to be loaded in the vehicle at a time. 6. Only authorised vehicle and specially trained driver should be engaged in gas cylinder transportation. 7. Do not use leaking cylinder. 8. Keep cylinder tied up/ chained & locked independent truck to prevent falling of one cylinder while



ACTIVITY - 21: WORK AT HEIGHTS						
1. Working at elevated places.	1. Person can fall down. 2. Material can fall down.	1. May sustain severe injuries or prove fatal. 2. May hit scrap/material stacked at ground or in 3. May hit the workers working at lower levels and prove fatal.	2	5	HIGH	4
1. Working under crane / lifting equipment.	1. Working without PPE. 2. Failure of slings. 3. Improper handling. 4. Overloading. 5. Defective equipment. 6. Lack of awareness.	1. Fatality / injury due to fall of loads. 2. Material damage.	ACTIVITY - 22: WORKING UNDER CRANE / LIFTING EQUIPMENT.			
			2	5	HIGH	4
						1. Provide guardrails/barricade at the work place. 2. Use PPE like full body harness, life line, helmets, safety shoes, etc. 3. Obtain the permit before starting the work at height above 4. Fall arrest and safety nets, etc. Must be installed. 5. Provide adequate working space (min. 0.6m). 6. Tie/ weld working platform with fixed support. 7. Use roof top walk ladder while working on a slopping roof. 8. Avoid movements on beam. 9. Keep the workplace neat and clean. 10. Remove the scrap immediately. 11. Do not throw or drop materials or equipment from height i.e. do not bomb materials. 12. All tools to be carried in a tool-kit bag or on working 13. Remove scrap from the planks. 14. Ensure wearing of helmet by the workers working at lower
						1. Use required PPE. 2. Use only certified slings as per colour coding. 3. No person to stand under the load. 4. Follow safe lifting procedures. 5. Only approved equipment to be used. 6. Ensure proper servicing. 7. Training to operator and providing banksman/roger for