****

ELECTRICAL SAFETY

RISK ASSESSMENT

Document ID: RA-004

**Document Approval History**

|  |  |  |  |
| --- | --- | --- | --- |
| **Document Revision No.** | **Effective Date** | **Created** **by:** | **Reviewed & Approved** **by:** |
| Revision 0 | DD.MM.YYYY | HSE Advisor | HSE Manager |
|  |  |  |  |

**Document Revision History**

|  |  |  |
| --- | --- | --- |
| **Document Revision No.** | **Sections Revised** | **Description of Changes** |
| 00 | N/a | Published |
|  |  |  |

|  |
| --- |
| Risk Assessment Details |
| Work Activity Assessed: |  | Ref. No. |  |
| Location/site of work activity: |  | Date Assessment carried out: | dd/mm/yyyy |
| Persons carrying out assessment: | Name: | Positions: |
|  |  |
|  |  |
|  |  |
|  |  |
| Reviewed by: |  |  |
| Approved by: |  |  |

| ELECTRICAL SAFETY RISK ASSESSMENT  |
| --- |
| Activity | Hazards | Consequences | Existing Controls | S | L | R | Notes |
| **Use of portable electric power tools and electrical equipment** | * Short circuit
 | * Electrocution
 | * All tools to be PAT tested every 3 months.
* All portable power tools shall be fitted with adequate fuse protection either in the tool body or in its electrical plug.
* All portable power tools shall be class 2 double insulated and/or have reinforced insulation throughout with a provision for earthing or double insulated 110V rating.
* Power tools shall be provided with automatic shut off devices, which render the tool inoperable if the operator releases hold. (Non-sustaining trigger switch)
 | 2  | 4 | 6 |  |
| * Inexperienced personnel using the portable power tool
 | * Injuries
* Damage of tools and equipment.
 | * Only those persons who have been adequately trained and experienced in the use of the tool shall be allowed to use the same.
* Test should be done to check operator’s competency.
 | 2 | 3 | 5 |  |
| * Accidental startup of tools
 | * Laceration
* Abrasion
 | * Tools shall be maintained in good working condition and tested at regular intervals.
* Safety glasses be used.
 | 2 | 3 | 5 |  |
| * Contact with rotating parts of power tools
 | * Injury.
* Amputation
 | * Rotating power tools shall be equipped with guards.
* Machine not to be left unattended while energized.
* Machine to be de-energized when cleaning or being maintained.
* First aid box & First Aider should be available on site.
 | 2 | 3 | 5 |  |
| * Getting hit by sharp / small particles on the eyes.
 | * Eye injury
 | * Check the tools for cracks before fitting.
* Do not apply excessive pressure.
* Power tools to be used as per manufacturer recommendations.
* Sides of cutting wheels shall not be used for sharpening.
* Safety glasses to be used.
 | 2 | 3 | 5 |  |

|  |
| --- |
| **Risk Calculation Matrix** |

|  |  |
| --- | --- |
| **Severity (S)** |  |
| Designation | Description |
| 5 | Catastrophic event with the potential of over 10 fatalities (10 FWI) |
| 4 | Catastrophic event with the potential between two and 10 fatalities (between 2 – 10 FWI) |
| 3 | Significant event with the potential of between five major injures and two fatalities (between .5 and 2 FWI) |
| 2 | Significant event with the potential of a single major injury to five major injures (between .1 - .5 FWI) |
| 1 | Event with the potential for less than 20 minor injuries or a single major injury (less than .1 FWI) |

|  |
| --- |
| **Likelihood (L)** |
| Designation | Description |
| 5 | >75% Very likely the risk will occur. Risk would occur 5 times a year or more. |
| 4 | 51-75% Likely the risk will occur. Risk would occur between 1 and 5 times a year. |
| 3 | 21 – 50% Possible the risk will occur. Risk would occur between once in 5 years to just less than once a year |
| 2 | 5 – 20% Unlikely the risk will occur. Risk would occur between once in 25 years or up to once in 5 years. |
| 1 | <5% Very unlikely the risk will occur. Risk would occur less than once in 25 years |

|  |
| --- |
| **Risk Classification (R)** |
| **Likelihood** | 5 | 6 | 7 | 8 | 9 | 10 |
| 4 | 5 | 6 | 7 | 8 | 9 |
| 3 | 4 | 5 | 6 | 7 | 8 |
| 2 | 3 | 4 | 5 | 6 | 7 |
| 1 | 2 | 3 | 4 | 5 | 6 |
| Note: Risk = Likelihood + Severity | 1 | 2 | 3 | 4 | 5 |
|  | **Severity** |

|  |
| --- |
| **Risk Classification and Action** |
| Designation | Classification | Action |
| 7 to 10 | Unacceptable | This situation is not tolerable. Work shall not be started or continued until the risk has been reduced. If it is not possible to reduce the risk even with unlimited resources the work has to remain prohibited. |
| 6 | Unsatisfactory | Work may continue provided the risk has been reduced to the lowest level ALARP. The task will be reviewed frequently and additional controls will be put into place to mitigate the risk, such as supervision. |
| 4 to 5 | Tolerable | Work may only start if the risk has been reduced to ALARP. Where work is already underway effort will be expended within a defined period to make further improvements to reduce risk to ALARP. |
| 2 to 3 | Low | Work may be started or continued. Effort should still be made so that risk is maintained at a level that is ALARP. |